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SAR EVALUATION REPORT

Applicant Name:
Samsung Electronics Co., Ltd.
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Gyeonggi-do, 16677, Korea

Date of Testing:
05/01/19-06/10/19
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
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FCC ID: **A3LSMF907B**

APPLICANT: **SAMSUNG ELECTRONICS CO., LTD.**

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model: SM-F907B

Equipment Class	Band & Mode	Tx Frequency	SAR					
			1g Head (W/kg)	1g Body-Worn (W/kg)	1g Hotspot (W/kg)	10g Phablet (W/kg)	1g UMPC Body (W/kg)	10g UMPC Extremity (W/kg)
PCE	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	0.17	0.13	0.56	N/A	0.54	1.39
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	< 0.1	0.19	0.99	2.79	0.69	3.14
PCE	UMTS 850	826.40 - 846.60 MHz	0.38	0.17	0.57	N/A	0.63	1.88
PCE	UMTS 1750	1712.4 - 1752.6 MHz	0.16	0.72	0.75	2.36	1.16	2.67
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.13	0.38	0.75	2.37	0.94	2.60
PCE	LTE Band 12	699.7 - 715.3 MHz	0.19	0.21	0.29	N/A	0.24	1.22
PCE	LTE Band 13	779.5 - 784.5 MHz	0.23	0.25	0.39	N/A	0.28	1.58
PCE	LTE Band 26 (Cell)	814.7 - 848.3 MHz	0.32	0.13	0.56	N/A	0.54	1.90
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	N/A	N/A	N/A	N/A	N/A	N/A
PCE	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	0.17	0.66	0.90	2.70	1.11	2.97
PCE	LTE Band 4 (AWS)	1710.7 - 1754.3 MHz	N/A	N/A	N/A	N/A	N/A	N/A
PCE	LTE Band 25 (PCS)	1850.7 - 1914.3 MHz	0.15	0.35	0.97	2.54	1.01	3.11
PCE	LTE Band 2 (PCS)	1850.7 - 1909.3 MHz	N/A	N/A	N/A	N/A	N/A	N/A
PCE	LTE Band 41	2498.5 - 2687.5 MHz	0.10	0.13	0.44	2.09	0.88	2.45
DTS	2.4 GHz WLAN	2412 - 2472 MHz	0.10	< 0.1	0.16	N/A	0.32	2.59
NII	U-NII-1	5180 - 5240 MHz	N/A	N/A	N/A	N/A	N/A	N/A
NII	U-NII-2A	5260 - 5320 MHz	0.12	0.20	N/A	0.69	0.40	0.92
NII	U-NII-2C	5500 - 5720 MHz	< 0.1	0.39	N/A	1.08	0.57	1.27
NII	U-NII-3	5745 - 5825 MHz	< 0.1	0.17	0.22	N/A	0.45	1.35
DSS/DTS	Bluetooth	2402 - 2480 MHz	< 0.1	< 0.1	< 0.1	N/A	0.12	0.75
Simultaneous SAR per KDB 690783 D01v01r03:			0.73	1.38	1.49	3.87	1.59	3.98

This wireless portable device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE C95.1-1992 and has been tested in accordance with the measurement procedures specified in Section 1.8 of this report; for North American frequency bands only.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them. Test results reported herein relate only to the item(s) tested.

Randy Ortanez
President

The SAR Tick is an initiative of the Mobile & Wireless Forum (MWF). While a product may be considered eligible, use of the SAR Tick logo requires an agreement with the MWF. Further details can be obtained by emailing: sartick@mwfai.info.

TESTING CERT#2041.01

REV 21.3 M
02/15/2019

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1 DEVICE UNDER TEST

1.1 Device Overview

Band & Mode	Operating Modes	Tx Frequency
GSM/GPRS/EDGE 850	Voice/Data	824.20 - 848.80 MHz
GSM/GPRS/EDGE 1900	Voice/Data	1850.20 - 1909.80 MHz
UMTS 850	Voice/Data	826.40 - 846.60 MHz
UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz
UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz
LTE Band 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 13	Voice/Data	779.5 - 784.5 MHz
LTE Band 26 (Cell)	Voice/Data	814.7 - 848.3 MHz
LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz
LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz
LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz
LTE Band 25 (PCS)	Voice/Data	1850.7 - 1914.3 MHz
LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
2.4 GHz WLAN	Voice/Data	2412 - 2472 MHz
U-NII-1	Voice/Data	5180 - 5240 MHz
U-NII-2A	Voice/Data	5260 - 5320 MHz
U-NII-2C	Voice/Data	5500 - 5720 MHz
U-NII-3	Voice/Data	5745 - 5825 MHz
Bluetooth	Data	2402 - 2480 MHz
NFC	Data	13.56 MHz
ANT+	Data	2402 - 2480 MHz
MST	Data	555 Hz - 8.33 kHz

1.2 Power Reduction for SAR

This device utilizes a power reduction mechanism for some wireless modes and bands for SAR compliance under portable hotspot conditions and under some conditions when the device is being used in close proximity to the user's hand, and when headphones are inserted. All hotspot SAR evaluations for this device were performed at the maximum allowed output power when hotspot is enabled. FCC KDB Publication 616217 D04v01r02 Section 6 and FCC KDB Publication 941225 D07v01r02 were used as a guideline for selecting SAR test distances for this device when being used in phablet and UMPC mini-tablet use conditions. Detailed descriptions of the power reduction mechanism are included in the operational description.

This device uses an independent fixed level power reduction mechanism for WLAN operations during voice or VoIP held to ear scenarios. Per FCC Guidance, the held-to-ear exposure conditions were evaluated at reduced power according to the head SAR positions described in IEEE 1528-2013. Detailed descriptions of the power reduction mechanism are included in the operational description.

1.3 Nominal and Maximum Output Power Specifications

This device operates using the following maximum and nominal output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB Publication 447498 D01v06.

1.3.1 PCE Maximum Output Power

Mode / Band		Voice (dBm)	Burst Average GMSK (dBm)				Burst Average 8-PSK (dBm)			
		1 TX Slot	*1 TX Slots*	*2 TX Slots*	*3 TX Slots*	*4 TX Slots*	*1 TX Slots*	*2 TX Slots*	*3 TX Slots*	*4 TX Slots*
GSM/GPRS/EDGE 850	Maximum	**33.0**	**33.0**	**32.0**	**30.5**	**28.5**	**28.0**	**26.0**	**24.0**	**23.0**
	Nominal	**32.0**	**32.0**	**31.0**	**29.5**	**27.5**	**27.0**	**25.0**	**23.0**	**22.0**
GSM/GPRS/EDGE 1900	Maximum	**30.0**	**30.0**	**29.0**	**27.5**	**25.5**	**27.0**	**25.0**	**23.0**	**22.0**
	Nominal	**29.0**	**29.0**	**28.0**	**26.5**	**24.5**	**26.0**	**24.0**	**22.0**	**21.0**

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	*3GPP HSDPA*	*3GPP HSUPA*	*3GPP DC-HSDPA*
UMTS Band 5 (850 MHz)	Maximum	**25.0**	**24.0**	**24.0**	**24.0**
	Nominal	**24.0**	**23.0**	**23.0**	**23.0**
UMTS Band 4 (1750 MHz)	Maximum	**24.0**	**23.0**	**23.0**	**23.0**
	Nominal	**23.0**	**22.0**	**22.0**	**22.0**
UMTS Band 2 (1900 MHz)	Maximum	**24.0**	**23.0**	**23.0**	**23.0**
	Nominal	**23.0**	**22.0**	**22.0**	**22.0**

Mode / Band		Modulated Average (dBm)
LTE Band 12	Maximum	**25.5**
	Nominal	**24.5**
LTE Band 13	Maximum	**25.5**
	Nominal	**24.5**
LTE Band 26 (Cell)	Maximum	**25.0**
	Nominal	**24.0**
LTE Band 5 (Cell)	Maximum	**25.0**
	Nominal	**24.0**
LTE Band 66 (AWS)	Maximum	**24.0**
	Nominal	**23.0**
LTE Band 4 (AWS)	Maximum	**24.0**
	Nominal	**23.0**
LTE Band 25 (PCS)	Maximum	**24.0**
	Nominal	**23.0**
LTE Band 2 (PCS)	Maximum	**24.0**
	Nominal	**23.0**
LTE Band 41	Maximum	**24.0**
	Nominal	**23.0**

1.3.2 PCE Reduced Output Power- Hotspot Mode, Proximity Sensor

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	*3GPP HSDPA*	*3GPP HSUPA*	*3GPP DC-HSDPA*
UMTS Band 4 (1750 MHz)	Maximum	**20.0**	**19.0**	**19.0**	**19.0**
	Nominal	**19.0**	**18.0**	**18.0**	**18.0**
UMTS Band 2 (1900 MHz)	Maximum	**20.0**	**19.0**	**19.0**	**19.0**
	Nominal	**19.0**	**18.0**	**18.0**	**18.0**

Mode / Band		Modulated Average (dBm)
LTE Band 66 (AWS)	Maximum	**19.5**
	Nominal	**18.5**
LTE Band 4 (AWS)	Maximum	**19.5**
	Nominal	**18.5**
LTE Band 25 (PCS)	Maximum	**20.0**
	Nominal	**19.0**
LTE Band 2 (PCS)	Maximum	**20.0**
	Nominal	**19.0**
LTE Band 41	Maximum	**21.0**
	Nominal	**20.0**

I. GPRS/EDGE Hotspot Reduced Targets

Mode / Band		Burst Average GMSK (dBm)				Burst Average 8-PSK (dBm)			
		1 TX Slots	*2 TX Slots*	*3 TX Slots*	*4 TX Slots*	*1 TX Slots*	*2 TX Slots*	*3 TX Slots*	*4 TX Slots*
GSM/GPRS/EDGE 1900	Maximum	**27.0**	**26.0**	**24.5**	**22.5**	**27.0**	**25.0**	**23.0**	**22.0**
	Nominal	**26.0**	**25.0**	**23.5**	**21.5**	**26.0**	**24.0**	**22.0**	**21.0**

II. GSM/GPRS/EDGE Proximity Sensor Reduced Targets

Mode / Band		Voice (dBm)	Burst Average GMSK (dBm)				Burst Average 8-PSK (dBm)			
		1 TX Slot	*1 TX Slots*	*2 TX Slots*	*3 TX Slots*	*4 TX Slots*	*1 TX Slots*	*2 TX Slots*	*3 TX Slots*	*4 TX Slots*
GSM/GPRS/EDGE 1900	Maximum	**27.0**	**27.0**	**26.0**	**24.5**	**22.5**	**27.0**	**25.0**	**23.0**	**22.0**
	Nominal	**26.0**	**26.0**	**25.0**	**23.5**	**21.5**	**26.0**	**24.0**	**22.0**	**21.0**

1.3.3 PCE Reduced Output Power- Earjack Activated

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	*3GPP HSDPA*	*3GPP HSUPA*	*3GPP DC-HSDPA*
UMTS Band 4 (1750 MHz)	Maximum	**22.0**	**21.0**	**21.0**	**21.0**
	Nominal	**21.0**	**20.0**	**20.0**	**20.0**
UMTS Band 2 (1900 MHz)	Maximum	**23.0**	**22.0**	**22.0**	**22.0**
	Nominal	**22.0**	**21.0**	**21.0**	**21.0**

Mode / Band		Modulated Average (dBm)
LTE Band 66 (AWS)	Maximum	**22.0**
	Nominal	**21.0**
LTE Band 4 (AWS)	Maximum	**22.0**
	Nominal	**21.0**
LTE Band 25 (PCS)	Maximum	**23.0**
	Nominal	**22.0**
LTE Band 2 (PCS)	Maximum	**23.0**
	Nominal	**22.0**

1.3.4 Maximum Bluetooth and WLAN Output Power

Mode / Band		Modulated Average - Single Tx Chain Antenna 1 (dBm)							
	Channel	1	2	3	4 - 9	10	11	12	13
IEEE 802.11b (2.4 GHz)	Maximum	20.0						19.0	15.5
	Nominal	19.0						18.0	14.5
IEEE 802.11g (2.4 GHz)	Maximum	18.0				17.5	15.5	12.0	6.5
	Nominal	17.0				16.5	14.5	11.0	5.5
IEEE 802.11n (2.4 GHz)	Maximum	18.0				17.5	15.5	12.0	6.5
	Nominal	17.0				16.5	14.5	11.0	5.5
IEEE 802.11ax (SU) (2.4 GHz)	Maximum	13.5	14.5	16.0	17.0	15.5	14.5	14.5	10.0
	Nominal	12.5	13.5	15.0	16.0	14.5	13.5	13.5	9.0

Mode / Band		Modulated Average - Single Tx Chain Antenna 2 (dBm)							
	Channel	1	2	3	4 - 9	10	11	12	13
IEEE 802.11b (2.4 GHz)	Maximum	20.0							18.5
	Nominal	19.0							17.5
IEEE 802.11g (2.4 GHz)	Maximum	18.0				17.5	15.5	12.0	6.5
	Nominal	17.0				16.5	14.5	11.0	5.5
IEEE 802.11n (2.4 GHz)	Maximum	18.0				17.5	15.5	12.0	6.5
	Nominal	17.0				16.5	14.5	11.0	5.5
IEEE 802.11ax (SU) (2.4 GHz)	Maximum	17.0						16.0	13.5
	Nominal	16.0						15.0	12.5

Mode / Band		Modulated Average - MIMO (dBm)							
	Channel	1	2	3	4 - 9	10	11	12	13
IEEE 802.11g (2.4 GHz)	Maximum	21.0				20.5	18.5	15.0	9.5
	Nominal	20.0				19.5	17.5	14.0	8.5
IEEE 802.11n (2.4 GHz)	Maximum	21.0				20.5	18.5	15.0	9.5
	Nominal	20.0				19.5	17.5	14.0	8.5
IEEE 802.11ax (SU) (2.4 GHz)	Maximum	17.0						14.0	14.0
	Nominal	16.0						13.0	13.0

Mode / Band		Modulated Average - Single Tx Chain (dBm)																							
		20 MHz Bandwidth									40 MHz Bandwidth								80 MHz Bandwidth						
	Channel	36	40-60	64	100	104-140	144	149	153-161	165	38	46-54	62	102	110-134	142	151	159	42	58	106	122	138	155
IEEE 802.11a (5 GHz)	Maximum	18.0																							
	Nominal	17.0																							
IEEE 802.11n (5 GHz)	Maximum	18.0									15.0	17.0	15.5	15.5	17.0	17.0	17.0	17.0							
	Nominal	17.0									14.0	16.0	14.5	14.5	16.0	16.0	16.0	16.0							
IEEE 802.11ac (5 GHz)	Maximum	18.0									15.0	17.0	15.5	15.5	17.0	17.0	17.0	17.0	13.0	13.0	14.5	16.0	16.0	16.0	
	Nominal	17.0									14.0	16.0	14.5	14.5	16.0	16.0	16.0	16.0	12.0	12.0	13.5	15.0	15.0	15.0	
IEEE 802.11ax (SU) (5 GHz)	Maximum	16.0									14.0								13.0						
	Nominal	15.0									13.0								12.0						

Mode / Band		Modulated Average - MIMO (dBm)																							
		20 MHz Bandwidth									40 MHz Bandwidth								80 MHz Bandwidth						
	Channel	36	40-60	64	100	104-140	144	149	153-161	165	38	46-54	62	102	110-134	142	151	159	42	58	106	122	138	155
IEEE 802.11a (5 GHz)	Maximum	21.0																							
	Nominal	20.0																							
IEEE 802.11n (5 GHz)	Maximum	21.0									18.0	20.0	18.5	18.5	20.0	20.0	20.0	20.0							
	Nominal	20.0									17.0	19.0	17.5	17.5	19.0	19.0	19.0	19.0							
IEEE 802.11ac (5 GHz)	Maximum	21.0									18.0	20.0	18.5	18.5	20.0	20.0	20.0	20.0	13.0	13.0	17.5	19.0	19.0	19.0	
	Nominal	20.0									17.0	19.0	17.5	17.5	19.0	19.0	19.0	19.0	12.0	12.0	16.5	18.0	18.0	18.0	
IEEE 802.11ax (SU) (5 GHz)	Maximum	16.0									14.0								13.0						
	Nominal	15.0									13.0								12.0						

Mode/Band		Modulated Average (dBm)
Bluetooth	Maximum	16.5
	Nominal	15.5
Bluetooth EDR	Maximum	10.5
	Nominal	9.5
Bluetooth LE 2Mbps	Maximum	7.0
	Nominal	6.0
Bluetooth LE 1Mbps, 125/500kbps	Maximum	5.5
	Nominal	4.5

Note: Targets for 802.11ax RU operations can be found in Appendix H.

1.3.5 Reduced WLAN Output Power

Mode / Band		Modulated Average - Antenna 1 (dBm)							
	Channel	1	2	3	4 - 9	10	11	12	13
IEEE 802.11b (2.4 GHz)	Maximum	17.0						17.0	15.5
	Nominal	16.0						16.0	14.5
IEEE 802.11g (2.4 GHz)	Maximum	17.0					15.5	12.0	6.5
	Nominal	16.0					14.5	11.0	5.5
IEEE 802.11n (2.4 GHz)	Maximum	17.0					15.5	12.0	6.5
	Nominal	16.0					14.5	11.0	5.5
IEEE 802.11ax (SU) (2.4 GHz)	Maximum	13.5	14.5	16.0	17.0	15.5	14.5	14.5	10.0
	Nominal	12.5	13.5	15.0	16.0	14.5	13.5	13.5	9.0

Mode / Band		Modulated Average - Antenna 2 (dBm)							
	Channel	1	2	3	4 - 9	10	11	12	13
IEEE 802.11b (2.4 GHz)	Maximum	17.0							
	Nominal	16.0							
IEEE 802.11g (2.4 GHz)	Maximum	17.0					15.5	12.0	6.5
	Nominal	16.0					14.5	11.0	5.5
IEEE 802.11n (2.4 GHz)	Maximum	17.0					15.5	12.0	6.5
	Nominal	16.0					14.5	11.0	5.5
IEEE 802.11ax (SU) (2.4 GHz)	Maximum	17.0						16.0	13.5
	Nominal	16.0						15.0	12.5

Mode / Band		Modulated Average - MIMO (dBm)							
	Channel	1	2	3	4 - 9	10	11	12	13
IEEE 802.11g (2.4 GHz)	Maximum	20.0					18.5	15.0	9.5
	Nominal	19.0					17.5	14.0	8.5
IEEE 802.11n (2.4 GHz)	Maximum	20.0					18.5	15.0	9.5
	Nominal	19.0					17.5	14.0	8.5
IEEE 802.11ax (SU) (2.4 GHz)	Maximum	17.0						14.0	14.0
	Nominal	16.0						13.0	13.0

Mode / Band		Modulated Average - Single Tx Chain (dBm)																						
		20 MHz Bandwidth									40 MHz Bandwidth								80 MHz Bandwidth					
	Channel	36	40-60	64	100	104-140	144	149	153-161	165	38	46-54	62	102	110-134	142	151	159	42	58	106	122	138	155
IEEE 802.11a (5 GHz)	Maximum	14.0																						
	Nominal	13.0																						
IEEE 802.11n (5 GHz)	Maximum	14.0									14.0													
	Nominal	13.0									13.0													
IEEE 802.11ac (5 GHz)	Maximum	14.0									14.0								13.0		14.0			
	Nominal	13.0									13.0								12.0		13.0			
IEEE 802.11ax (SU) (5 GHz)	Maximum	14.0									14.0								13.0					
	Nominal	13.0									13.0								12.0					

Mode / Band		Modulated Average - MIMO (dBm)																						
		20 MHz Bandwidth									40 MHz Bandwidth								80 MHz Bandwidth					
	Channel	36	40-60	64	100	104-140	144	149	153-161	165	38	46-54	62	102	110-134	142	151	159	42	58	106	122	138	155
IEEE 802.11a (5 GHz)	Maximum	17.0																						
	Nominal	16.0																						
IEEE 802.11n (5 GHz)	Maximum	17.0									17.0													
	Nominal	16.0									16.0													
IEEE 802.11ac (5 GHz)	Maximum	17.0									17.0								13.0		17.0			
	Nominal	16.0									16.0								12.0		16.0			
IEEE 802.11ax (SU) (5 GHz)	Maximum	16.0									14.0								13.0					
	Nominal	15.0									13.0								12.0					

Note: Targets for 802.11ax RU operations can be found in Appendix H.

1.3.6 Maximum Output Power During Conditions with Simultaneous 2.4 GHz WLAN and 5 GHz WLAN

Mode / Band		Modulated Average - Antenna 1 (dBm)								Modulated Average - Antenna 2 (dBm)								Modulated Average - MIMO (dBm)							
	Channel	1	2	3	4 - 9	10	11	12	13	1	2	3	4 - 9	10	11	12	13	1	2	3	4 - 9	10	11	12	13
IEEE 802.11b (2.4 GHz)	Maximum	17.0						17.0	15.5	17.0								N/A							
	Nominal	16.0						16.0	14.5	16.0								N/A							
IEEE 802.11g (2.4 GHz)	Maximum	17.0					15.5	12.0	6.5	17.0					15.5	12.0	6.5	20.0					18.5	15.0	9.5
	Nominal	16.0					14.5	11.0	5.5	16.0					14.5	11.0	5.5	19.0					17.5	14.0	8.5
IEEE 802.11n (2.4 GHz)	Maximum	17.0					15.5	12.0	6.5	17.0					15.5	12.0	6.5	20.0					18.5	15.0	9.5
	Nominal	16.0					14.5	11.0	5.5	16.0					14.5	11.0	5.5	19.0					17.5	14.0	8.5
IEEE 802.11ax (SU) (2.4 GHz)	Maximum	13.5	14.5	16.0	17.0	15.5	14.5	14.5	10.0	17.0						16.0	13.5	17.0						14.0	14.0
	Nominal	12.5	13.5	15.0	16.0	14.5	13.5	13.5	9.0	16.0						15.0	12.5	16.0						13.0	13.0

Mode / Band		Modulated Average - Antenna 1 (dBm)	Modulated Average - Antenna 2 (dBm)	Modulated Average - MIMO (dBm)
		20 MHz Bandwidth	20 MHz Bandwidth	20 MHz Bandwidth
	Channel	36 -165	36 -165	36 | 40-60 | 64 | 100 -165
IEEE 802.11a (5 GHz)	Maximum	14.0	14.0	17.0
	Nominal	13.0	13.0	16.0
IEEE 802.11n (5 GHz)	Maximum	14.0	14.0	17.0
	Nominal	13.0	13.0	16.0
IEEE 802.11ac (5 GHz)	Maximum	14.0	14.0	17.0
	Nominal	13.0	13.0	16.0
IEEE 802.11ax(SU) (5 GHz)	Maximum	14.0	14.0	16.0
	Nominal	13.0	13.0	15.0

Mode / Band		Modulated Average - Antenna 1 (dBm)					Modulated Average - Antenna 2 (dBm)					Modulated Average - MIMO (dBm)				
		40 MHz Bandwidth					40 MHz Bandwidth					40 MHz Bandwidth				
	Channel	38	46-54	62	102	110-159	38	46-54	62	102	110-159	38	46-54	62	102	110-159
IEEE 802.11n (5 GHz)	Maximum	14.0					14.0					17.0				
	Nominal	13.0					13.0					16.0				
IEEE 802.11ac (5 GHz)	Maximum	14.0					14.0					17.0				
	Nominal	13.0					13.0					16.0				
IEEE 802.11ax(SU) (5 GHz)	Maximum	14.0					14.0					14.0				
	Nominal	13.0					13.0					13.0				

Mode / Band		Modulated Average - Antenna 1 (dBm)				Modulated Average - Antenna 2 (dBm)				Modulated Average - MIMO (dBm)			
		80 MHz Bandwidth				80 MHz Bandwidth				80 MHz Bandwidth			
	Channel	42	58	106	122 - 155	42	58	106	122 - 155	42	58	106	122 - 155
IEEE 802.11ac (5 GHz)	Maximum	13.0	13.0	14.0		13.0	13.0	14.0		13.0	13.0	17.0	
	Nominal	12.0	12.0	13.0		12.0	12.0	13.0		12.0	12.0	16.0	
IEEE 802.11ax(SU) (5 GHz)	Maximum	13.0				13.0				13.0			
	Nominal	12.0				12.0				12.0			

Note: Targets for 802.11ax RU operations can be found in Appendix H.

1.3.7 Reduced Output Power During Conditions with Simultaneous 2.4 GHz WLAN and 5 GHz WLAN

Mode / Band		Modulated Average - Antenna 1 (dBm)								Modulated Average - Antenna 2 (dBm)								Modulated Average - MIMO (dBm)							
	Channel	1	2	3	4 - 9	10	11	12	13	1	2	3	4 - 9	10	11	12	13	1	2	3	4 - 9	10	11	12	13
IEEE 802.11b (2.4 GHz)	Maximum	14.0								14.0								N/A							
	Nominal	13.0								13.0								N/A							
IEEE 802.11g (2.4 GHz)	Maximum	14.0						12.0	6.5	14.0						12.0	6.5	17.0						15.0	9.5
	Nominal	13.0						11.0	5.5	13.0						11.0	5.5	16.0						14.0	8.5
IEEE 802.11n (2.4 GHz)	Maximum	17.0						12.0	6.5	14.0						12.0	6.5	17.0						15.0	9.5
	Nominal	13.0						11.0	5.5	13.0						11.0	5.5	16.0						14.0	8.5
IEEE 802.11ax (SU) (2.4 GHz)	Maximum	13.5	14.0					14.0	10.0	14.0						14.0	13.5	16.0	17.0				17.0	14.0	14.0
	Nominal	12.5	13.0					13.0	9.0	13.0						13.0	12.5	15.0	16.0				16.0	13.0	13.0

Mode / Band		Modulated Average - Antenna 1 (dBm)	Modulated Average - Antenna 2 (dBm)	Modulated Average - MIMO (dBm)
		20 MHz Bandwidth	20 MHz Bandwidth	20 MHz Bandwidth
	Channel	36 -165	36 -165	36 | 40-60 | 64 | 100 -165
IEEE 802.11a (5 GHz)	Maximum	14.0	14.0	17.0
	Nominal	13.0	13.0	16.0
IEEE 802.11n (5 GHz)	Maximum	14.0	14.0	17.0
	Nominal	13.0	13.0	16.0
IEEE 802.11ac (5 GHz)	Maximum	14.0	14.0	17.0
	Nominal	13.0	13.0	16.0
IEEE 802.11ax(SU) (5 GHz)	Maximum	14.0	14.0	16.0
	Nominal	13.0	13.0	15.0

Mode / Band		Modulated Average - Antenna 1 (dBm)					Modulated Average - Antenna 2 (dBm)					Modulated Average - MIMO (dBm)				
		40 MHz Bandwidth					40 MHz Bandwidth					40 MHz Bandwidth				
	Channel	38	46-54	62	102	110-159	38	46-54	62	102	110-159	38	46-54	62	102	110-159
IEEE 802.11n (5 GHz)	Maximum	14.0					14.0					17.0				
	Nominal	13.0					13.0					16.0				
IEEE 802.11ac (5 GHz)	Maximum	14.0					14.0					17.0				
	Nominal	13.0					13.0					16.0				
IEEE 802.11ax(SU) (5 GHz)	Maximum	14.0					14.0					14.0				
	Nominal	13.0					13.0					13.0				

Mode / Band		Modulated Average - Antenna 1 (dBm)				Modulated Average - Antenna 2 (dBm)				Modulated Average - MIMO (dBm)			
		80 MHz Bandwidth				80 MHz Bandwidth				80 MHz Bandwidth			
	Channel	42	58	106	122 - 155	42	58	106	122 - 155	42	58	106	122 - 155
IEEE 802.11ac (5 GHz)	Maximum	13.0	13.0	14.0		13.0	13.0	14.0		13.0	13.0	17.0	
	Nominal	12.0	12.0	13.0		12.0	12.0	13.0		12.0	12.0	16.0	
IEEE 802.11ax(SU) (5 GHz)	Maximum	13.0				13.0				13.0			
	Nominal	12.0				12.0				12.0			

Note: Targets for 802.11ax RU operations can be found in Appendix H.

1.4 DUT Antenna Locations

The overall dimensions of this device are > 9 x 5 cm. A diagram showing the location of the device antennas can be found in Appendix F. This device is considered a "phablet" when it is in closed configuration and a "UMPC mini-tablet" when it is in open configuration. Exact antenna dimensions and separation distances are shown in the Technical Descriptions in the FCC filing.

Table 1-1
Device Edges/Sides for Handset Configuration SAR Testing

Mode	Back	Front	Top	Bottom	Right	Left
GPRS 850	Yes	Yes	No	Yes	Yes	No
GPRS 1900	Yes	Yes	No	Yes	Yes	Yes
UMTS 850	Yes	Yes	No	Yes	Yes	No
UMTS 1750	Yes	Yes	No	Yes	Yes	Yes
UMTS 1900	Yes	Yes	No	Yes	Yes	Yes
LTE Band 12	Yes	Yes	No	Yes	Yes	No
LTE Band 13	Yes	Yes	No	Yes	Yes	No
LTE Band 26 (Cell)	Yes	Yes	No	Yes	Yes	No
LTE Band 66 (AWS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 25 (PCS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 41	Yes	Yes	No	Yes	Yes	Yes
2.4 GHz WLAN Ant 1	Yes	Yes	Yes	No	Yes	No
2.4 GHz WLAN Ant 2	Yes	Yes	Yes	No	No	Yes
5 GHz WLAN Ant 1	Yes	Yes	Yes	No	Yes	No
5 GHz WLAN Ant 2	Yes	Yes	Yes	No	No	Yes
5 GHZ WLAN MIMO	Yes	Yes	Yes	No	Yes	Yes
Bluetooth	Yes	Yes	Yes	No	Yes	No

Table 1-2
Device Edges/Sides for UMPC Configuration SAR Testing

Mode	Back	Front	Top	Bottom	Right	Left
GPRS 850	Yes	Yes	No	Yes	Yes	No
GPRS 1900	Yes	Yes	No	Yes	Yes	No
UMTS 850	Yes	Yes	No	Yes	Yes	No
UMTS 1750	Yes	Yes	No	Yes	Yes	No
UMTS 1900	Yes	Yes	No	Yes	Yes	No
LTE Band 12	Yes	Yes	No	Yes	Yes	No
LTE Band 13	Yes	Yes	No	Yes	Yes	No
LTE Band 26 (Cell)	Yes	Yes	No	Yes	Yes	No
LTE Band 66 (AWS)	Yes	Yes	No	Yes	Yes	No
LTE Band 25 (PCS)	Yes	Yes	No	Yes	Yes	No
LTE Band 41	Yes	Yes	No	Yes	Yes	No
2.4 GHz WLAN Ant 1	Yes	Yes	Yes	No	Yes	No
2.4 GHz WLAN Ant 2	Yes	Yes	Yes	No	No	No
2.4 GHz WLAN MIMO	Yes	Yes	Yes	No	Yes	No
5 GHz WLAN Ant 1	Yes	Yes	Yes	No	Yes	No
5 GHz WLAN Ant 2	Yes	Yes	Yes	No	No	No
5 GHz WLAN MIMO	Yes	Yes	Yes	No	Yes	No
Bluetooth	Yes	Yes	Yes	No	Yes	No

Note: Particular DUT edges were not required to be evaluated for wireless router SAR, phablet SAR or UMPC mini-tablet SAR if the edges were greater than 2.5 cm from the transmitting antenna according to FCC KDB Publication 941225 D06v02r01 Section III, FCC KDB Publication 941225 D07v01r02 and FCC KDB Publication 648474 D04v01r03. The distances between the transmit antennas and the edges of the device are included in the filing. When wireless router mode is enabled, U-NII-1, U-NII-2A, U-NII-2C operations are disabled.

1.5 Near Field Communications (NFC) Antenna

This DUT has NFC operations. The NFC antenna is integrated into the device for this model. Therefore, all SAR tests were performed with the device which already incorporates the NFC antenna. A diagram showing the location of the NFC antenna can be found in Appendix F.

1.6 Simultaneous Transmission Capabilities

According to FCC KDB Publication 447498 D01v06, transmitters are considered to be operating simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds.

This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB Publication 447498 D01v06 4.3.2 procedures.

Table 1-3
Simultaneous Transmission Scenarios

No.	Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet	Mini Tablet	Notes
1	GSM voice + 2.4 GHz WI-FI	Yes	Yes	N/A	Yes	Yes	
2	GSM voice + 5 GHz WI-FI	Yes	Yes	N/A	Yes	Yes	
3	GSM voice + 2.4 GHz Bluetooth	Yes^	Yes	N/A	Yes	Yes	^ Bluetooth Tethering is considered
4	GSM voice + 2.4 GHz Bluetooth + 5 GHz WI-FI	Yes^	Yes	N/A	Yes	Yes	^ Bluetooth Tethering is considered
5	GSM voice + 2.4 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	Yes	
6	GSM voice + 5 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	Yes	
7	GSM voice + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes	Yes	N/A	Yes	Yes	
8	GSM voice + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	Yes	
9	GSM voice + 2.4 GHz Bluetooth + 5 GHz WI-FI MIMO	Yes^	Yes	N/A	Yes	Yes	^ Bluetooth Tethering is considered
10	UMTS + 2.4 GHz WI-FI	Yes	Yes	Yes	Yes	Yes	
11	UMTS + 5 GHz WI-FI	Yes	Yes	Yes	Yes	Yes	
12	UMTS + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
13	UMTS + 2.4 GHz Bluetooth + 5 GHz WI-FI	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
14	UMTS + 2.4 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	Yes	
15	UMTS + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	Yes	
16	UMTS + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes	Yes	Yes	Yes	Yes	
17	UMTS + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	Yes	
18	UMTS + 2.4 GHz Bluetooth + 5 GHz WI-FI MIMO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
19	LTE + 2.4 GHz WI-FI	Yes	Yes	Yes	Yes	Yes	
20	LTE + 5 GHz WI-FI	Yes	Yes	Yes	Yes	Yes	
21	LTE + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
22	LTE + 2.4 GHz Bluetooth + 5 GHz WI-FI	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
23	LTE + 2.4 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	Yes	
24	LTE + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	Yes	
25	LTE + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes	Yes	Yes	Yes	Yes	
26	LTE + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	Yes	
27	LTE + 2.4 GHz Bluetooth + 5 GHz WI-FI MIMO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
28	GPRS/EDGE + 2.4 GHz WI-FI	N/A	N/A	Yes	Yes	Yes	
29	GPRS/EDGE + 5 GHz WI-FI	N/A	N/A	Yes	Yes	Yes	
30	GPRS/EDGE + 2.4 GHz Bluetooth	N/A	N/A	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
31	GPRS/EDGE + 2.4 GHz Bluetooth + 5 GHz WI-FI	N/A	N/A	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
32	GPRS/EDGE + 2.4 GHz WI-FI MIMO	N/A	N/A	Yes	Yes	Yes	
33	GPRS/EDGE + 5 GHz WI-FI MIMO	N/A	N/A	Yes	Yes	Yes	
34	GPRS/EDGE + 2.4 GHz WI-FI + 5 GHz WI-FI	N/A	N/A	Yes	Yes	Yes	
35	GPRS/EDGE + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	N/A	N/A	Yes	Yes	Yes	
36	GPRS/EDGE + 2.4 GHz Bluetooth + 5 GHz WI-FI MIMO	N/A	N/A	Yes^	Yes	Yes	^ Bluetooth Tethering is considered

1. 2.4 GHz WLAN and 2.4 GHz Bluetooth share the same antenna path and cannot transmit simultaneously.
2. All licensed modes share the same antenna path and cannot transmit simultaneously.
3. When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi-RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario.
4. Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held-to-ear or body-worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI direct beyond that listed in the above table.
5. 5 GHz Wireless Router is only supported for the U-NII-3 by S/W, therefore U-NII-1, U-NII2A, and U-NII2C were not evaluated for wireless router conditions.
6. This device supports 2x2 MIMO Tx for WLAN 802.11a/g/n/ac/ax. 802.11a/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM. Each WLAN antenna can transmit independently or together when operating with MIMO.
7. This device supports VOLTE.

8. This device supports VoWIFI.
9. This device supports Bluetooth Tethering.

1.7 Miscellaneous SAR Test Considerations

(A) WIFI/BT

Since U-NII-1 and U-NII-2A bands have the same maximum output power and the highest reported SAR for U-NII-2A is less than 1.2 W/kg, SAR is not required for U-NII-1 band according to FCC KDB Publication 248227 D01v02r02.

Since Wireless Router operations are not allowed by the chipset firmware using U-NII-1, U-NII-2A & U-NII-2C WIFI, only 2.4 GHz and U-NII-3 WIFI Hotspot SAR tests and combinations are considered for SAR with respect to Wireless Router configurations according to FCC KDB 941225 D06v02r01.

This device supports IEEE 802.11ax with the following features:

a) Up to 80 MHz Bandwidth only for 5GHz
b) Up to 20MHz Bandwidth only for 2.4 GHz
c) No aggregate channel configurations
d) 2 Tx antenna output
e) Up to 1024 QAM is supported
f) TDWR and Band gap channels are supported for 5 GHz
g) MU – MIMO UL Operations are not supported

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" when it is in a closed configuration since the diagonal dimension is greater than 160mm and less than 200mm. Phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Because wireless router operations are not supported for U-NII-1, U-NII-2A & U-NII-2C WLAN, phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz WLAN, 2.4 GHz Bluetooth, and U-NII-3 WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

Per FCC Guidance, SAR testing was not required for 802.11ax when applying the initial test configuration procedures of KDB 248227, with 802.11ax considered a higher order 802.11 mode.

This device supports 2x2 MIMO Tx for WLAN 802.11a/g/n/ac/ax. 802.11a/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM.

This device supports channel 1-13 for 2.4 GHz WLAN. However, due to the reduced output power for channels 12 and 13, channels 1, 6, and 11 were considered for SAR testing per KDB 248227 D01v02r02.

(B) Licensed Transmitter(s)

GSM/GPRS/EDGE DTM is not supported for US bands. Therefore, the GSM Voice modes in this report do not transmit simultaneously with GPRS/EDGE Data.

This device is only capable of QPSK HSUPA in the uplink. Therefore, no additional SAR tests are required beyond that described for devices with HSUPA in KDB 941225 D01v03r01.

LTE SAR for the higher modulations and lower bandwidths were not tested since the maximum average output power of all required channels and configurations was not more than 0.5 dB higher than the highest bandwidth; and the reported LTE SAR for the highest bandwidth was less than 1.45 W/kg for all configurations according to FCC KDB 941225 D05v02r04.

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" when it is closed configuration since the diagonal dimension is greater than 160mm and less than 200mm. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Additional SAR tests for phablet SAR were evaluated per KDB 616217 Section 6 (See Section 6.9 for more information)

This device supports LTE capabilities with overlapping transmission frequency ranges. When the supported frequency range of an LTE Band falls completely within an LTE band with a larger transmission frequency range, both LTE bands have the same target power (or the band with the larger transmission frequency range has a higher target power), and both LTE bands share the same transmission path and signal characteristics, SAR was only assessed for the band with the larger transmission frequency range.

This device supports 64QAM on the uplink and 256QAM on the downlink for LTE Operations. Conducted powers for 64QAM uplink configurations were measured per Section 5.1 of FCC KDB Publication 941225 D05v02r05. SAR was not required for 64QAM since the highest maximum output power for 64QAM is ≤ ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45W/kg, per Section 5.2.4 of FCC KDB Publication 941225 D05v02r05.

1.8 Guidance Applied

- IEEE 1528-2013
- FCC KDB Publication 941225 D01v03r01, D05v02r04, D05Av01r02, D06v02r01 (2G/3G/4G and Hotspot)
- FCC KDB Publication 248227 D01v02r02 (SAR Considerations for 802.11 Devices)
- FCC KDB Publication 447498 D01v06 (General SAR Guidance)
- FCC KDB Publication 865664 D01v01r04, D02v01r02 (SAR Measurements up to 6 GHz)
- FCC KDB Publication 648474 D04v01r03 (Phablet Procedures)
- FCC KDB Publication 616217 D04v01r02 (Proximity Sensor)
- October 2013 TCB Workshop Notes (GPRS Testing Considerations)
- May 2017 TCB Workshop Notes
- FCC KDB Publication 941225 D07v01r02 (UMPC Mini-Tablet Devices)

1.9 Device Serial Numbers

Several samples with identical hardware were used to support SAR testing. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units. The serial numbers used for each test are indicated alongside the results in Section 11.

2 LTE INFORMATION

LTE Information					
Form Factor	Portable Handset				
Frequency Range of each LTE transmission band	LTE Band 12 (699.7 - 715.3 MHz)				
	LTE Band 13 (779.5 - 784.5 MHz)				
	LTE Band 26 (Cell) (814.7 - 848.3 MHz)				
	LTE Band 5 (Cell) (824.7 - 848.3 MHz)				
	LTE Band 66 (AWS) (1710.7 - 1779.3 MHz)				
	LTE Band 4 (AWS) (1710.7 - 1754.3 MHz)				
	LTE Band 25 (PCS) (1850.7 - 1914.3 MHz)				
	LTE Band 2 (PCS) (1850.7 - 1909.3 MHz)				
	LTE Band 41 (2498.5 - 2687.5 MHz)				
Channel Bandwidths	LTE Band 12: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 13: 5 MHz, 10 MHz				
	LTE Band 26 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz				
	LTE Band 5 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 66 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 4 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 25 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 2 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 41: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High
LTE Band 12: 1.4 MHz	699.7 (23017)		707.5 (23095)	715.3 (23173)	
LTE Band 12: 3 MHz	700.5 (23025)		707.5 (23095)	714.5 (23165)	
LTE Band 12: 5 MHz	701.5 (23035)		707.5 (23095)	713.5 (23155)	
LTE Band 12: 10 MHz	704 (23060)		707.5 (23095)	711 (23130)	
LTE Band 13: 5 MHz	779.5 (23205)		782 (23230)	784.5 (23255)	
LTE Band 13: 10 MHz	N/A		782 (23230)	N/A	
LTE Band 26 (Cell): 1.4 MHz	814.7 (26697)		831.5 (26865)	848.3 (27033)	
LTE Band 26 (Cell): 3 MHz	815.5 (26705)		831.5 (26865)	847.5 (27025)	
LTE Band 26 (Cell): 5 MHz	816.5 (26715)		831.5 (26865)	846.5 (27015)	
LTE Band 26 (Cell): 10 MHz	819 (26740)		831.5 (26865)	844 (26990)	
LTE Band 26 (Cell): 15 MHz	821.5 (26765)		831.5 (26865)	841.5 (26965)	
LTE Band 5 (Cell): 1.4 MHz	824.7 (20407)		836.5 (20525)	848.3 (20643)	
LTE Band 5 (Cell): 3 MHz	825.5 (20415)		836.5 (20525)	847.5 (20635)	
LTE Band 5 (Cell): 5 MHz	826.5 (20425)		836.5 (20525)	846.5 (20625)	
LTE Band 5 (Cell): 10 MHz	829 (20450)		836.5 (20525)	844 (20600)	
LTE Band 66 (AWS): 1.4 MHz	1710.7 (131979)		1745 (132322)	1779.3 (132665)	
LTE Band 66 (AWS): 3 MHz	1711.5 (131987)		1745 (132322)	1778.5 (132657)	
LTE Band 66 (AWS): 5 MHz	1712.5 (131997)		1745 (132322)	1777.5 (132647)	
LTE Band 66 (AWS): 10 MHz	1715 (132022)		1745 (132322)	1775 (132622)	
LTE Band 66 (AWS): 15 MHz	1717.5 (132047)		1745 (132322)	1772.5 (132597)	
LTE Band 66 (AWS): 20 MHz	1720 (132072)		1745 (132322)	1770 (132572)	
LTE Band 4 (AWS): 1.4 MHz	1710.7 (19957)		1732.5 (20175)	1754.3 (20393)	
LTE Band 4 (AWS): 3 MHz	1711.5 (19965)		1732.5 (20175)	1753.5 (20385)	
LTE Band 4 (AWS): 5 MHz	1712.5 (19975)		1732.5 (20175)	1752.5 (20375)	
LTE Band 4 (AWS): 10 MHz	1715 (20000)		1732.5 (20175)	1750 (20350)	
LTE Band 4 (AWS): 15 MHz	1717.5 (20025)		1732.5 (20175)	1747.5 (20325)	
LTE Band 4 (AWS): 20 MHz	1720 (20050)		1732.5 (20175)	1745 (20300)	
LTE Band 25 (PCS): 1.4 MHz	1850.7 (26047)		1882.5 (26365)	1914.3 (26683)	
LTE Band 25 (PCS): 3 MHz	1851.5 (26055)		1882.5 (26365)	1913.5 (26675)	
LTE Band 25 (PCS): 5 MHz	1852.5 (26065)		1882.5 (26365)	1912.5 (26665)	
LTE Band 25 (PCS): 10 MHz	1855 (26090)		1882.5 (26365)	1910 (26640)	
LTE Band 25 (PCS): 15 MHz	1857.5 (26115)		1882.5 (26365)	1907.5 (26615)	
LTE Band 25 (PCS): 20 MHz	1860 (26140)		1882.5 (26365)	1905 (26590)	
LTE Band 2 (PCS): 1.4 MHz	1850.7 (18607)		1880 (18900)	1909.3 (19193)	
LTE Band 2 (PCS): 3 MHz	1851.5 (18615)		1880 (18900)	1908.5 (19185)	
LTE Band 2 (PCS): 5 MHz	1852.5 (18625)		1880 (18900)	1907.5 (19175)	
LTE Band 2 (PCS): 10 MHz	1855 (18650)		1880 (18900)	1905 (19150)	
LTE Band 2 (PCS): 15 MHz	1857.5 (18675)		1880 (18900)	1902.5 (19125)	
LTE Band 2 (PCS): 20 MHz	1860 (18700)		1880 (18900)	1900 (19100)	
LTE Band 41: 5 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 10 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 15 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 20 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
UE Category	DL UE Cat 16 (QPSK, 16QAM, 64QAM, 256QAM), UL UE Cat 5 (QPSK, 16QAM, 64QAM)				
Modulations Supported in UL	QPSK, 16QAM, 64QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3~6.2.5? (manufacturer attestation to be provided)	YES				
A-MPR (Additional MPR) disabled for SAR Testing?	YES				
LTE Additional Information	This device does not support full CA features on 3GPP Release 15. All uplink communications are identical to the Release 8 Specifications. The following LTE Release 15 Features are not supported: LTE CA, Relay, HetNet, Enhanced MIMO, eICIC, WIFI Offloading, eMBMS, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

3 INTRODUCTION

The FCC and Innovation, Science, and Economic Development Canada have adopted the guidelines for evaluating the environmental effects of radio frequency (RF) radiation in ET Docket 93-62 on Aug. 6, 1996 and Health Canada Safety Code 6 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices. [1]

The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz [3] and Health Canada RF Exposure Guidelines Safety Code 6 [22]. The measurement procedure described in IEEE/ANSI C95.3-2002 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave [4] is used for guidance in measuring the Specific Absorption Rate (SAR) due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the International Committee for Non-Ionizing Radiation Protection (ICNIRP) in Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," Report No. Vol 74. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards.

3.1 SAR Definition

Specific Absorption Rate is defined as the time derivative (rate) of the incremental energy (dU) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body (see Equation 3-1).

Equation 3-1
SAR Mathematical Equation

$$SAR = \frac{d}{dt}\left(\frac{dU}{dm}\right) = \frac{d}{dt}\left(\frac{dU}{\rho dv}\right)$$

SAR is expressed in units of Watts per Kilogram (W/kg).

$$SAR = \frac{\sigma \cdot E^2}{\rho}$$

where:

σ = conductivity of the tissue-simulating material (S/m)
ρ = mass density of the tissue-simulating material (kg/m^3)
E = Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relation to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.[6]

4 DOSIMETRIC ASSESSMENT

4.1 Measurement Procedure

The evaluation was performed using the following procedure compliant to FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013:

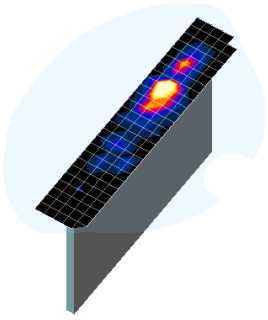


Figure 4-1
Sample SAR Area Scan

1. The SAR distribution at the exposed side of the head or body was measured at a distance no greater than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the device-head and body interface and the horizontal grid resolution was determined per FCC KDB Publication 865664 D01v01r04 (See Table 4-1) and IEEE 1528-2013.
2. The point SAR measurement was taken at the maximum SAR region determined from Step 1 to enable the monitoring of SAR fluctuations/drifts during the 1g/10g cube evaluation. SAR at this fixed point was measured and used as a reference value.
3. Based on the area scan data, the peak of the region with maximum SAR was determined by spline interpolation. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB Publication 865664 D01v01r04 (See Table 4-1) and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (see references or the DASY manual online for more details):

   a. SAR values at the inner surface of the phantom are extrapolated from the measured values along the line away from the surface with spacing no greater than that in Table 4-1. The extrapolation was based on a least-squares algorithm. A polynomial of the fourth order was calculated through the points in the z-axis (normal to the phantom shell).

   b. After the maximum interpolated values were calculated between the points in the cube, the SAR was averaged over the spatial volume (1g or 10g) using a 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot" condition (in x, y, and z directions). The volume was then integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were obtained through interpolation, in order to calculate the averaged SAR.

   c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan was complete to calculate the SAR drift. If the drift deviated by more than 5%, the SAR test and drift measurements were repeated.

Table 4-1
Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04*

Frequency	Maximum Area Scan Resolution (mm) (Δx_{area}, Δy_{area})	Maximum Zoom Scan Resolution (mm) (Δx_{zoom}, Δy_{zoom})	Maximum Zoom Scan Spatial Resolution (mm)			Minimum Zoom Scan Volume (mm) (x,y,z)
			Uniform Grid	Graded Grid		
			$\Delta z_{zoom}(n)$	$\Delta z_{zoom}(1)$*	$\Delta z_{zoom}(n>1)$*	
≤ 2 GHz	≤ 15	≤ 8	≤ 5	≤ 4	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 30
2-3 GHz	≤ 12	≤ 5	≤ 5	≤ 4	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 30
3-4 GHz	≤ 12	≤ 5	≤ 4	≤ 3	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 28
4-5 GHz	≤ 10	≤ 4	≤ 3	≤ 2.5	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 25
5-6 GHz	≤ 10	≤ 4	≤ 2	≤ 2	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 22

*Also compliant to IEEE 1528-2013 Table 6

5 DEFINITION OF REFERENCE POINTS

5.1 EAR REFERENCE POINT

Figure 5-2 shows the front, back and side views of the SAM Twin Phantom. The point "M" is the reference point for the center of the mouth, "LE" is the left ear reference point (ERP), and "RE" is the right ERP. The ERP is 15mm posterior to the entrance to the ear canal (EEC) along the B-M line (Back-Mouth), as shown in Figure 5-1. The plane passing through the two ear canals and M is defined as the Reference Plane. The line N-F (Neck-Front), also called the Reference Pivoting Line, is not perpendicular to the reference plane (see Figure 5-1). Line B-M is perpendicular to the N-F line. Both N-F and B-M lines are marked on the external phantom shell to facilitate handset positioning [5].

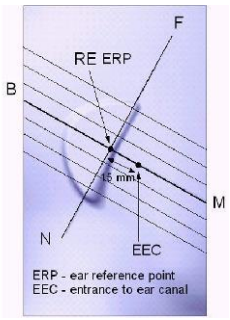


Figure 5-1
Close-Up Side view of ERP

5.2 HANDSET REFERENCE POINTS

Two imaginary lines on the handset were established: the vertical centerline and the horizontal line. The test device was placed in a normal operating position with the acoustic output located along the "vertical centerline" on the front of the device aligned to the "ear reference point" (See Figure 5-3). The acoustic output was than located at the same level as the center of the ear reference point. The test device was positioned so that the "vertical centerline" was bisecting the front surface of the handset at its top and bottom edges, positioning the "ear reference point" on the outer surface of the both the left and right head phantoms on the ear reference point.

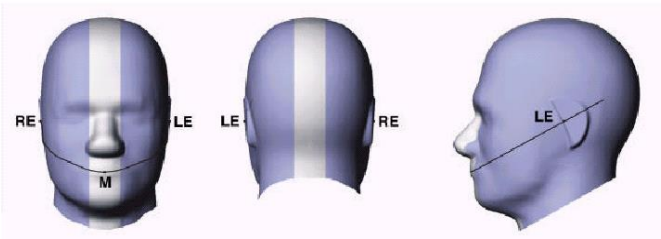


Figure 5-2
Front, back and side view of SAM Twin Phantom

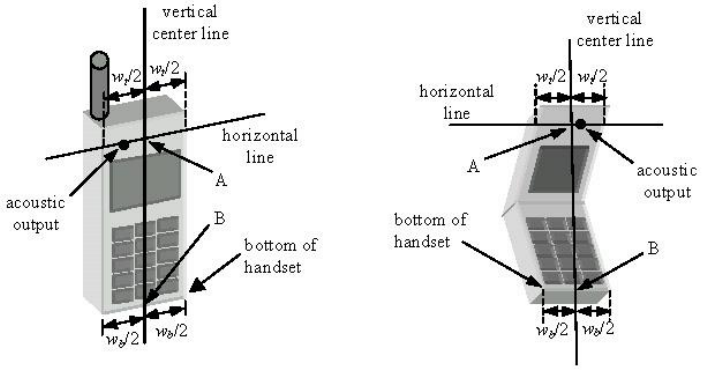


Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

6 TEST CONFIGURATION POSITIONS

6.1 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameters: relative permittivity ε = 3 and loss tangent δ = 0.02.

6.2 Positioning for Cheek

1. The test device was positioned with the device close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 6-1), such that the plane defined by the vertical center line and the horizontal line of the phone is approximately parallel to the sagittal plane of the phantom.

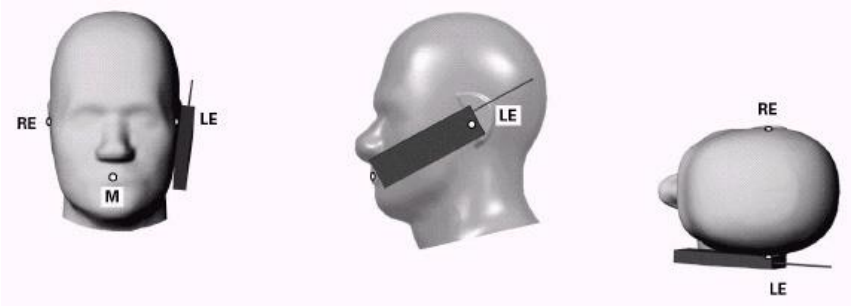


Figure 6-1 Front, Side and Top View of Cheek Position

2. The handset was translated towards the phantom along the line passing through RE & LE until the handset touches the pinna.
3. While maintaining the handset in this plane, the handset was rotated around the LE-RE line until the vertical centerline was in the reference plane.
4. The phone was then rotated around the vertical centerline until the phone (horizontal line) was symmetrical was respect to the line NF.
5. While maintaining the vertical centerline in the reference plane, keeping point A on the line passing through RE and LE, and maintaining the device contact with the ear, the device was rotated about the NF line until any point on the handset made contact with a phantom point below the ear (cheek) (See Figure 6-2).

6.3 Positioning for Ear / 15º Tilt

With the test device aligned in the “Cheek Position”:

1. While maintaining the orientation of the phone, the phone was retracted parallel to the reference plane far enough to enable a rotation of the phone by 15degrees.
2. The phone was then rotated around the horizontal line by 15 degrees.
3. While maintaining the orientation of the phone, the phone was moved parallel to the reference plane until any part of the handset touched the head. (In this position, point A was located on the line RE-LE). The tilted position is obtained when the contact is on the pinna. If the contact was at any location other than the pinna, the angle of the phone would then be reduced. In this situation, the tilted position was obtained when any part of the phone was in contact of the ear as well as a second part of the phone was in contact with the head (see Figure 6-2).

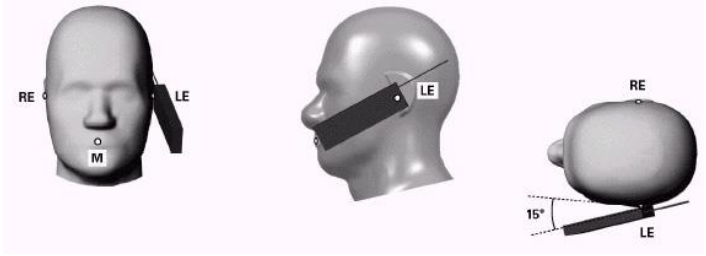


Figure 6-2 Front, Side and Top View of Ear/15º Tilt Position

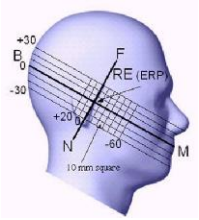


Figure 6-3
Side view w/ relevant markings

6.4 SAR Evaluations near the Mouth/Jaw Regions of the SAM Phantom

Antennas located near the bottom of a phone may require SAR measurements around the mouth and jaw regions of the SAM head phantom. This typically applies to clam-shell style phones that are generally longer in the unfolded normal use positions or to certain older style long rectangular phones. Per IEEE 1528-2013, a rotated SAM phantom is necessary to allow probe access to such regions. Both SAM heads of the TwinSAM-Chin20 are rotated 20 degrees around the NF line. Each head can be removed from the table for emptying and cleaning.

Under these circumstances, the following procedures apply, adopted from the FCC guidance on SAR handsets document FCC KDB Publication 648474 D04v01r03. The SAR required in these regions of SAM should be measured using a flat phantom. The phone should be positioned with a separation distance of 4 mm between the ear reference point (ERP) and the outer surface of the flat phantom shell. While maintaining this distance at the ERP location, the low (bottom) edge of the phone should be lowered from the phantom to establish the same separation distance between the peak SAR location identified by the truncated partial SAR distribution measured with the SAM phantom. The distance from the peak SAR location to the phone is determined by the straight line passing perpendicularly through the phantom surface. When it is not feasible to maintain 4 mm separation at the ERP while also establishing the required separation at the peak SAR location, the top edge of the phone will be allowed to touch the phantom with a separation < 4 mm at the ERP. The phone should not be tilted to the left or right while placed in this inclined position to the flat phantom.

6.5 Body-Worn Accessory Configurations

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 6-4). Per FCC KDB Publication 648474 D04v01r03, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

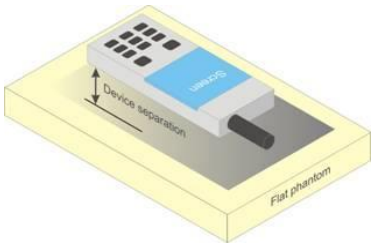


Figure 6-4
Sample Body-Worn Diagram

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not

contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented.
Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

6.6 Extremity Exposure Configurations

Devices that are designed or intended for use on extremities or mainly operated in extremity only exposure conditions; i.e., hands, wrists, feet and ankles, may require extremity SAR evaluation. When the device also operates in close proximity to the user's body, SAR compliance for the body is also required. The 1g body and 10g extremity SAR Exclusion Thresholds found in KDB Publication 447498 D01v06 should be applied to determine SAR test requirements.

Per KDB Publication 447498 D01v06, Cell phones (handsets) are not normally designed to be used on extremities or operated in extremity only exposure conditions. The maximum output power levels of handsets generally do not require extremity SAR testing to show compliance. Therefore, extremity SAR was not evaluated for this device.

6.7 Wireless Router Configurations

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06v02r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10 mm from the front, back and edges of the device containing transmitting antennas within 2.5 cm of their edges, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D01v06 procedures. The "Portable Hotspot" feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

6.8 Phablet Configurations

For smart phones with a display diagonal dimension > 150 mm or an overall diagonal dimension > 160 mm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that

support voice calls next to the ear, the phablets procedures outlined in KDB Publication 648474 D04v01r03 should be applied to evaluate SAR compliance. A device marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance. In addition to the normally required head and body-worn accessory SAR test procedures required for handsets, the UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna <=25 mm from that surface or edge, in direct contact with the phantom, for 10g SAR. The UMPC mini-tablet 1g SAR at 5 mm is not required. When hotspot mode applies, 10g SAR is required only for the surfaces and edges with hotspot mode 1g SAR > 1.2 W/kg.

6.9 Proximity Sensor Considerations

This device uses a power reduction mechanism to reduce output powers in certain use conditions when the device is used close to the user's body.

When the device's antenna is within a certain distance of the user, the sensor activates and reduces the maximum allowed output power. However, the sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, additional evaluation is needed in the vicinity of the triggering distance to ensure SAR is compliant when the device is allowed to operate at a non-reduced output power level. FCC KDB Publication 616217 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device at these additional test positions. Sensor triggering distance summary data is included in Appendix G.

The sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the sensor entirely covers the antennas.

6.10 UMPC Mini-Tablet Configurations

Small hand-held tablets (and devices of similar form factors that are designed primarily for interactive hand-held use next to or near the body of users) require body SAR and extremity SAR evaluation. These types of mini-tablets are normally optimized for mobile web access and multimedia use. UMPC test procedures are applicable for devices with displays and overall diagonal dimension ≤ 20 cm. Devices are to be set up according to KDB publication 941225 D07v01r02 requirements and are configured with maximum output power during SAR assessment for a worst case SAR evaluation.

Per KDB Publication 941225 D07v01r02, UMPC mini-tablet devices must be tested for all surfaces and edges ≤ 25 mm from a transmitting antenna. A test separation distance of 10 mm may be considered for 1g SAR, with the addition of 10g SAR measurement at 0 mm test separation distance for all measured 1g SAR (at 10 mm) configurations to address hand exposure.

7 RF EXPOSURE LIMITS

7.1 Uncontrolled Environment

UNCONTROLLED ENVIRONMENTS are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

7.2 Controlled Environment

CONTROLLED ENVIRONMENTS are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Table 7-1
SAR Human Exposure Specified in ANSI/IEEE C95.1-1992 and Health Canada Safety Code 6

HUMAN EXPOSURE LIMITS		
	UNCONTROLLED ENVIRONMENT *General Population* (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT *Occupational* (W/kg) or (mW/g)
Peak Spatial Average SAR Head	1.6	8.0
Whole Body SAR	0.08	0.4
Peak Spatial Average SAR Hands, Feet, Ankle, Wrists, etc.	4.0	20

1. The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
2. The Spatial Average value of the SAR averaged over the whole body.
3. The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

8 FCC MEASUREMENT PROCEDURES

Power measurements for licensed transmitters are performed using a base station simulator under digital average power.

8.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D01v06, when SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as *reported* SAR. The highest *reported* SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r03.

8.2 3G SAR Test Reduction Procedure

In FCC KDB Publication 941225 D01v03r01, certain transmission modes within a frequency band and wireless mode evaluated for SAR are defined as primary modes. The equivalent modes considered for SAR test reduction are denoted as secondary modes. When the maximum output power including tune-up tolerance specified for production units in a secondary mode is ≤ 0.25 dB higher than the primary mode or when the highest reported SAR of the primary mode, scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode, is ≤ 1.2 W/kg, SAR measurements are not required for the secondary mode. These criteria are referred to as the 3G SAR test reduction procedure. When the 3G SAR test reduction procedure is not satisfied, SAR measurements are additionally required for the secondary mode.

8.3 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB Publication 941225 D01v03r01 “3G SAR Measurement Procedures.”

The device is placed into a simulated call using a base station simulator in a RF shielded chamber. Establishing connections in this manner ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. Devices under test are evaluated prior to testing, with a fully charged battery and were configured to operate at maximum output power. In order to verify that the device is tested throughout the SAR test at maximum output power, the SAR measurement system measures a “point SAR” at an arbitrary reference point at the start and end of the 1 gram SAR evaluation, to assess for any power drifts during the evaluation. If the power drift deviates by more than 5%, the SAR test and drift measurements are repeated.

8.4 SAR Measurement Conditions for UMTS

8.4.1 Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the general descriptions in section 5.2 of 3GPP TS 34.121, using the appropriate RMC with TPC (transmit power control) set to all “1s” or applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HS-DPCCH etc) are tabulated in this test report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations are identified.

8.4.2 Head SAR Measurements

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest reported SAR configuration in 12.2 kbps RMC for head exposure.

8.4.3 Body SAR Measurements

SAR for body exposure configurations is measured using the 12.2 kbps RMC with the TPC bits all "1s". The 3G SAR test reduction procedure is applied to other spreading codes and multiple $DPDCH_n$ configurations supported by the handset with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using an applicable RMC configuration with the corresponding spreading code or $DPDCH_n$, for the highest reported SAR configuration in 12.2 kbps RMC.

8.4.4 SAR Measurements with Rel 5 HSDPA

The 3G SAR test reduction procedure is applied to HSDPA body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSDPA is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, for the highest reported SAR configuration in 12.2 kbps RMC without HSDPA. Handsets with both HSDPA and HSUPA are tested according to Release 6 HSPA test procedures.

8.4.5 SAR Measurements with Rel 6 HSUPA

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA.

When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing.

8.4.6 SAR Measurements with Rel 6 HSUPA

SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

8.5 SAR Measurement Conditions for LTE

LTE modes are tested according to FCC KDB 941225 D05v02r04 publication. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. The R&S CMW500 or Anritsu MT8820C simulators are used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

8.5.1 Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

8.5.2 MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

8.5.3 A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by setting NS=01 on the base station simulator.

8.5.4 Required RB Size and RB Offsets for SAR Testing

According to FCC KDB 941225 D05v02r04:

a. Per Section 5.2.1, SAR is required for QPSK 1 RB Allocation for the largest bandwidth
    i. The required channel and offset combination with the highest maximum output power is required for SAR.
    ii. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the RB offset configuration with highest output power for that channel.
    iii. When the reported SAR for a required test channel is > 1.45 W/kg, SAR is required for all RB offset configurations for that channel.
b. Per Section 5.2.2, SAR is required for 50% RB allocation using the largest bandwidth following the same procedures outlined in Section 5.2.1.
c. Per Section 5.2.3, QPSK SAR is not required for the 100% allocation when the highest maximum output power for the 100% allocation is less than the highest maximum output power of the 1 RB and 50% RB allocations and the reported SAR for the 1 RB and 50% RB allocations is < 0.8 W/kg.
d. Per Section 5.2.4 and 5.3, SAR tests for higher order modulations and lower bandwidths configurations are not required when the conducted power of the required test configurations determined by Sections 5.2.1 through 5.2.3 is less than or equal to ½ dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is <1.45 W/kg.

8.5.5 TDD

LTE TDD testing is performed using the SAR test guidance provided in FCC KDB 941225 D05v02r04. TDD is tested at the highest duty factor using UL-DL configuration 0 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05v02r04. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211 Section 4.

8.6 SAR Testing with 802.11 Transmitters

The normal network operating configurations of 802.11 transmitters are not suitable for SAR measurements. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure the results are consistent and reliable. See KDB Publication 248227 D01v02r02 for more details.

8.6.1 General Device Setup

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters.

A periodic duty factor is required for current generation SAR systems to measure SAR. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92 - 96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR is scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

8.6.2 U-NII-1 and U-NII-2A

For devices that operate in both U-NII-1 and U-NII-2A bands, when the same maximum output power is specified for both bands, SAR measurement using OFDM SAR test procedures is not required for U-NII-1 unless the highest reported SAR for U-NII-2A is > 1.2 W/kg. When different maximum output powers are specified for the bands, SAR measurement for the U-NII band with the lower maximum output power is not required unless the highest reported SAR for the U-NII band with the higher maximum output power, adjusted by the ratio of lower to higher specified maximum output power for the two bands, is > 1.2 W/kg. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.6.3 U-NII-2C and U-NII-3

The frequency range covered by U-NII-2C and U-NII-3 is 380 MHz (5.47 – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. When Terminal Doppler Weather Radar (TDWR) restriction applies, the channels at 5.60 – 5.65 GHz in U-NII-2C band must be disabled with acceptable mechanisms and documented in the equipment certification. Unless band gap channels are permanently disabled, SAR must be considered for these channels. Each band is tested independently according to the normally required OFDM SAR measurement and probe calibration frequency points requirements.

8.6.4 Initial Test Position Procedure

For exposure conditions with multiple test positions, such as handset operating next to the ear, devices with hotspot mode or UMPC mini-tablet, procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all positions in an exposure condition. The test position with the highest extrapolated (peak) SAR is used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg, no additional testing for the remaining test positions is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.6.5 2.4 GHz SAR Test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either the fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

1) When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.

2) When the reported SAR is > 0.8 W/kg, SAR is required for that position using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

2.4 GHz 802.11 g/n/ax OFDM are additionally evaluated for SAR if the highest reported SAR for 802.11b, adjusted by the ratio of the OFDM to DSSS specified maximum output power, is > 1.2 W/kg. When SAR is required for OFDM modes in 2.4 GHz band, the Initial Test Configuration Procedures should be followed. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.6.6 OFDM Transmission Mode and SAR Test Channel Selection

When the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with the largest channel bandwidth, lowest order modulation and lowest data rate. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a, 802.11n and 802.11ac or 802.11g and 802.11n with the same channel bandwidth, modulation and data rate etc., the lower order 802.11 mode i.e., 802.11a, then 802.11n and 802.11ac or 802.11g then 802.11n, is used for SAR measurement. Per FCC Guidance, 802.11ax was considered a higher order 802.11 mode when compared to a/b/g/n/ac to apply KDB Publication 248227 Guidance. When the maximum output power are the same for multiple test channels, either according to the default or additional power measurement requirements, SAR is measured using the channel closest to the middle of the frequency band or aggregated band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

8.6.7 Initial Test Configuration Procedure

For OFDM, an initial test configuration is determined for each frequency band and aggregated band, according to the transmission mode with the highest maximum output power specified for SAR measurements. When the same maximum output power is specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration(s) with the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order IEEE 802.11 mode. The channel of the transmission mode with the highest average RF output conducted power will be the initial test configuration.

When the reported SAR is ≤ 0.8 W/kg, no additional measurements on other test channels are required. Otherwise, SAR is evaluated using the subsequent highest average RF output channel until the reported SAR result is ≤ 1.2 W/kg or all channels are measured. When there are multiple untested channels having the same subsequent highest average RF output power, the channel with higher frequency from the lowest 802.11 mode is considered for SAR measurements (See Section 8.6.6). When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.6.8 Subsequent Test Configuration Procedures

For OFDM configurations in each frequency band and aggregated band, SAR is evaluated for initial test configuration using the fixed test position or the initial test position procedure. When the highest reported SAR (for the initial test configuration), adjusted by the ratio of the specified maximum output power of the subsequent test configuration to initial test configuration, is ≤ 1.2 W/kg, no additional SAR tests for the subsequent test configurations are required. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.6.9 MIMO SAR considerations

Per KDB Publication 248227 D01v02r02, the simultaneous SAR provisions in KDB Publication 447498 D01v06 should be applied to determine simultaneous transmission SAR test exclusion for WIFI MIMO. If the sum of 1g single transmission chain SAR measurements is <1.6 W/kg, no additional SAR measurements for MIMO are required. Alternatively, SAR for MIMO can be measured with all antennas transmitting simultaneously at the specified maximum output power of MIMO operation. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

9 RF CONDUCTED POWERS

9.1 GSM Conducted Powers

Table 9-1
Maximum Conducted Power

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	32.42	32.39	31.39	**29.76**	27.91	27.26	25.36	23.32	22.24
	190	32.14	32.17	31.37	**29.89**	27.79	27.13	25.48	23.38	22.29
	251	32.21	32.20	31.12	**29.63**	27.55	26.93	25.19	23.13	22.25
GSM 1900	512	29.13	29.18	28.28	**26.50**	24.72	26.70	24.43	22.87	21.30
	661	29.55	29.64	28.35	**26.89**	25.00	26.84	24.42	22.40	21.54
	810	29.61	29.61	28.54	**26.99**	24.95	26.58	24.40	22.46	21.57
Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	23.39	23.36	25.37	**25.50**	24.90	18.23	19.34	19.06	19.23
	190	23.11	23.14	25.35	**25.63**	24.78	18.10	19.46	19.12	19.28
	251	23.18	23.17	25.10	**25.37**	24.54	17.90	19.17	18.87	19.24
GSM 1900	512	20.10	20.15	22.26	**22.24**	21.71	17.67	18.41	18.61	18.29
	661	20.52	20.61	22.33	**22.63**	21.99	17.81	18.40	18.14	18.53
	810	20.58	20.58	22.52	**22.73**	21.94	17.55	18.38	18.20	18.56
GSM 850	**Frame Avg.Targets:**	22.97	22.97	24.98	**25.24**	24.49	17.97	18.98	18.74	18.99
GSM 1900		19.97	19.97	21.98	**22.24**	21.49	16.97	18.98	17.74	17.99

Table 9-2
Hotspot Reduced Conducted Power

Maximum Burst-Averaged Output Power									
		GPRS/EDGE Data (GMSK)				*EDGE Data (8-PSK)*			
Band	**Channel**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	26.38	25.36	**23.68**	21.79	25.88	24.29	22.13	21.25
	661	26.53	25.71	**23.96**	22.06	26.02	24.59	22.44	21.46
	810	26.61	25.48	**23.56**	21.94	26.09	24.43	22.46	21.36
Calculated Maximum Frame-Averaged Output Power									
		GPRS/EDGE Data (GMSK)				*EDGE Data (8-PSK)*			
Band	**Channel**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	17.35	19.34	**19.42**	18.78	16.85	18.27	17.87	18.24
	661	17.50	19.69	**19.70**	19.05	16.99	18.57	18.18	18.45
	810	17.58	19.46	**19.30**	18.93	17.06	18.41	18.20	18.35
GSM 1900	**Frame Avg.Targets:**	16.97	18.98	19.24	18.49	16.97	17.98	17.74	17.99

Table 9-3
Proximity Sensor Reduced Conducted Power

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	26.34	26.38	25.36	**23.68**	21.79	25.88	24.29	22.13	21.25
	661	26.77	26.53	25.71	**23.96**	22.06	26.02	24.59	22.44	21.46
	810	26.72	26.61	25.48	**23.56**	21.94	26.09	24.43	22.46	21.36
Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	17.31	17.35	19.34	**19.42**	18.78	16.85	18.27	17.87	18.24
	661	17.74	17.50	19.69	**19.70**	19.05	16.99	18.57	18.18	18.45
	810	17.69	17.58	19.46	**19.30**	18.93	17.06	18.41	18.20	18.35
GSM 1900	**Frame Avg.Targets:**	16.97	16.97	18.98	19.24	18.49	16.97	17.98	17.74	17.99

Note:

1. Both burst-averaged and calculated frame-averaged powers are included. Frame-averaged power was calculated from the measured burst-averaged power by converting the slot powers into linear units and calculating the energy over 8 timeslots.
2. GPRS/EDGE (GMSK) output powers were measured with coding scheme setting of 1 (CS1) on the base station simulator. CS1 was configured to measure GPRS output power measurements and SAR to ensure GMSK modulation in the signal. Our Investigation has shown that CS1 - CS4 settings do not have any impact on the output levels or modulation in the GPRS modes.
3. EDGE (8-PSK) output powers were measured with MCS7 on the base station simulator. MCS7 coding scheme was used to measure the output powers for EDGE since investigation has shown that choosing MCS7 coding scheme will ensure 8-PSK modulation. It has been shown that MCS levels that produce 8PSK modulation do not have an impact on output power.

GSM Class: B
GPRS Multislot class: 33 (Max 4 Tx uplink slots)
EDGE Multislot class: 33 (Max 4 Tx uplink slots)
DTM Multislot Class: N/A

Figure 9-1
Power Measurement Setup

9.2 UMTS Conducted Powers

Table 9-4
Maximum Conducted Power

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	24.85	24.74	24.51	23.49	23.82	23.80	23.70	23.82	23.77	-
99		12.2 kbps AMR	24.82	24.73	24.45	23.50	23.78	23.83	23.73	23.83	23.79	-
6	HSDPA	Subtest 1	23.88	23.85	23.58	22.16	22.61	22.73	22.52	22.95	22.91	0
6		Subtest 2	23.86	23.87	23.59	22.13	22.61	22.72	22.75	22.92	22.87	0
6		Subtest 3	23.41	23.35	23.05	21.65	22.10	22.22	22.25	22.42	22.35	0.5
6		Subtest 4	23.39	23.32	23.04	21.65	22.09	22.20	22.22	22.40	22.36	0.5
6	HSUPA	Subtest 1	23.73	23.66	23.45	22.06	22.48	22.58	22.51	22.70	22.61	0
6		Subtest 2	21.74	21.73	21.46	20.61	20.54	20.61	20.55	20.70	20.61	2
6		Subtest 3	22.72	22.69	22.41	21.09	21.52	21.62	21.50	21.66	21.59	1
6		Subtest 4	21.72	21.65	21.42	19.60	20.06	20.10	20.03	20.24	20.11	2
6		Subtest 5	23.75	23.65	23.44	22.19	22.55	22.66	22.59	22.74	22.66	0
8	DC-HSDPA	Subtest 1	23.30	23.40	23.30	22.16	22.41	22.45	22.61	22.18	22.43	0
8		Subtest 2	23.39	23.58	23.29	22.15	22.16	22.38	22.12	22.46	22.39	0
8		Subtest 3	23.24	23.25	22.91	21.74	21.85	21.94	21.79	21.90	21.92	0.5
8		Subtest 4	23.17	23.17	22.92	21.63	21.75	21.87	21.94	21.84	21.78	0.5

Table 9-5
Reduced Conducted Power

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	19.38	19.44	19.56	19.77	19.93	20.00	-
99		12.2 kbps AMR	19.27	19.51	19.66	19.80	20.00	19.99	-
6	HSDPA	Subtest 1	18.42	18.67	18.85	18.69	18.95	18.87	0
6		Subtest 2	18.47	18.65	18.88	18.65	19.00	18.92	0
6		Subtest 3	17.97	18.25	18.34	18.12	18.31	18.35	0.5
6		Subtest 4	17.93	18.19	18.35	18.20	18.44	18.26	0.5
6	HSUPA	Subtest 1	18.21	18.59	18.67	18.87	19.00	18.95	0
6		Subtest 2	16.18	16.63	16.68	17.06	17.23	17.11	2
6		Subtest 3	17.17	17.58	17.63	18.06	18.20	18.06	1
6		Subtest 4	16.19	16.62	16.66	17.05	17.21	17.10	2
6		Subtest 5	18.23	18.60	18.68	18.90	19.00	18.96	0
8	DC-HSDPA	Subtest 1	18.18	18.27	18.20	18.90	18.94	18.98	0
8		Subtest 2	18.15	18.35	18.48	18.70	19.00	18.99	0
8		Subtest 3	17.71	17.75	18.16	18.29	18.33	18.57	0.5
8		Subtest 4	17.25	17.75	17.78	18.41	18.27	18.25	0.5

It is expected by the manufacturer that MPR for some HSPA subtests may be up to 2 dB more than specified by 3GPP, but also as low as 0 dB according to the chipset implementation in this model.

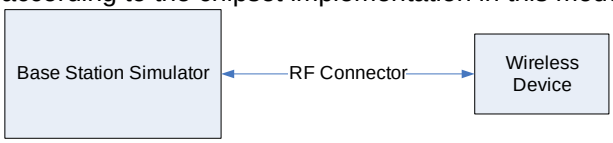


Figure 9-2
Power Measurement Setup

9.3 LTE Conducted Powers

9.3.1 LTE Band 12

Table 9-6
LTE Band 12 Conducted Powers - 10 MHz Bandwidth

LTE Band 12 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23095 (707.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.53	0	0
	1	25	**24.56**		0
	1	49	24.17		0
	25	0	**23.60**	0-1	1
	25	12	23.46		1
	25	25	23.53		1
	50	0	23.58		1
16QAM	1	0	23.55	0-1	1
	1	25	23.74		1
	1	49	23.47		1
	25	0	22.62	0-2	2
	25	12	22.53		2
	25	25	22.48		2
	50	0	22.62		2
64QAM	1	0	21.98	0-2	2
	1	25	22.51		2
	1	49	22.13		2
	25	0	21.54	0-3	3
	25	12	21.61		3
	25	25	21.43		3
	50	0	21.57		3

Note: LTE Band 12 at 10 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 9-7
LTE Band 12 Conducted Powers - 5 MHz Bandwidth

LTE Band 12 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23035 (701.5 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23155 (713.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.47	24.42	24.41	0	0
	1	12	24.62	24.55	24.47		0
	1	24	24.53	24.48	24.39		0
	12	0	23.68	23.53	23.53	0-1	1
	12	6	23.65	23.58	23.56		1
	12	13	23.66	23.57	23.51		1
	25	0	23.66	23.55	23.50		1
16QAM	1	0	23.74	23.61	23.65	0-1	1
	1	12	23.74	23.68	23.77		1
	1	24	23.72	23.54	23.59		1
	12	0	22.72	22.51	22.55	0-2	2
	12	6	22.66	22.60	22.64		2
	12	13	22.61	22.57	22.60		2
	25	0	22.64	22.53	22.51		2
64QAM	1	0	22.20	22.55	22.65	0-2	2
	1	12	22.02	22.64	22.10		2
	1	24	22.29	22.61	21.92		2
	12	0	21.20	21.60	21.36	0-3	3
	12	6	21.17	21.55	21.24		3
	12	13	21.11	21.63	20.96		3
	25	0	21.08	21.54	21.10		3

Table 9-8
LTE Band 12 Conducted Powers - 3 MHz Bandwidth

LTE Band 12 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23025 (700.5 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23165 (714.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.57	24.46	24.38	0	0
	1	7	24.57	24.49	24.40		0
	1	14	24.49	24.44	24.39		0
	8	0	23.71	23.56	23.43	0-1	1
	8	4	23.75	23.60	23.46		1
	8	7	23.64	23.61	23.46		1
	15	0	23.71	23.55	23.47		1
16QAM	1	0	23.79	23.72	23.58	0-1	1
	1	7	23.77	23.67	23.63		1
	1	14	23.73	23.70	23.68		1
	8	0	22.67	22.63	22.49	0-2	2
	8	4	22.76	22.66	22.55		2
	8	7	22.73	22.67	22.56		2
	15	0	22.70	22.54	22.41		2
64QAM	1	0	22.42	22.67	22.21	0-2	2
	1	7	22.15	22.72	21.84		2
	1	14	22.01	22.70	21.86		2
	8	0	21.32	21.62	21.08	0-3	3
	8	4	21.16	21.61	20.96		3
	8	7	21.03	21.66	20.87		3
	15	0	21.19	21.58	20.95		3

Table 9-9
LTE Band 12 Conducted Powers -1.4 MHz Bandwidth

LTE Band 12 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23017 (699.7 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23173 (715.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.43	24.31	24.36	0	0
	1	2	24.49	24.42	24.39		0
	1	5	24.47	24.37	24.41		0
	3	0	24.42	24.40	24.37		0
	3	2	24.59	24.45	24.39		0
	3	3	24.50	24.40	24.34		0
	6	0	23.59	23.48	23.44	0-1	1
16QAM	1	0	23.68	23.58	23.64	0-1	1
	1	2	23.78	23.72	23.63		1
	1	5	23.17	23.66	23.61		1
	3	0	23.62	23.53	23.48		1
	3	2	23.69	23.63	23.40		1
	3	3	23.66	23.53	23.49		1
	6	0	22.72	22.49	22.42	0-2	2
64QAM	1	0	22.52	22.64	21.90	0-2	2
	1	2	22.53	22.68	21.95		2
	1	5	22.32	22.67	21.91		2
	3	0	22.41	22.59	21.83		2
	3	2	22.41	22.61	21.88		2
	3	3	22.18	22.60	21.92		2
	6	0	21.25	21.42	20.78	0-3	3

9.3.2 LTE Band 13

Table 9-10
LTE Band 13 Conducted Powers - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23230 (782.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.54**	0	0
	1	25	24.41		0
	1	49	24.39		0
	25	0	23.55	0-1	1
	25	12	**23.57**		1
	25	25	23.52		1
	50	0	23.49		1
16QAM	1	0	23.51	0-1	1
	1	25	23.71		1
	1	49	23.63		1
	25	0	22.55	0-2	2
	25	12	22.58		2
	25	25	22.53		2
	50	0	22.54		2
64QAM	1	0	21.90	0-2	2
	1	25	22.56		2
	1	49	22.47		2
	25	0	21.33	0-3	3
	25	12	21.52		3
	25	25	21.55		3
	50	0	21.66		3

Table 9-11
LTE Band 13 Conducted Powers - 5 MHz Bandwidth

LTE Band 13 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23230 (782.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.32	0	0
	1	12	24.38		0
	1	24	24.30		0
	12	0	23.43	0-1	1
	12	6	23.40		1
	12	13	23.41		1
	25	0	23.39		1
16QAM	1	0	23.47	0-1	1
	1	12	23.52		1
	1	24	23.30		1
	12	0	22.46	0-2	2
	12	6	22.41		2
	12	13	22.51		2
	25	0	22.37		2
64QAM	1	0	22.43	0-2	2
	1	12	22.52		2
	1	24	22.46		2
	12	0	21.42	0-3	3
	12	6	21.45		3
	12	13	21.48		3
	25	0	21.37		3

Note: LTE Band 13 at 5 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

9.3.3 LTE Band 26 (Cell)

Table 9-12
LTE Band 26 (Cell) Conducted Powers - 15 MHz Bandwidth

LTE Band 26 (Cell) 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 26865 (831.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.49**	0	0
	1	36	24.42		0
	1	74	24.26		0
	36	0	23.53	0-1	1
	36	18	**23.61**		1
	36	37	23.52		1
	75	0	23.51		1
16QAM	1	0	23.67	0-1	1
	1	36	23.72		1
	1	74	23.56		1
	36	0	22.50	0-2	2
	36	18	22.58		2
	36	37	22.47		2
	75	0	22.57		2
64QAM	1	0	22.61	0-2	2
	1	36	22.66		2
	1	74	22.48		2
	36	0	21.55	0-3	3
	36	18	21.59		3
	36	37	21.52		3
	75	0	21.56		3

Note: LTE Band 26 (Cell) at 15 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 9-13
LTE Band 26 (Cell) Conducted Powers - 10 MHz Bandwidth

LTE Band 26 (Cell) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26740 (819.0 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 26990 (844.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.36	24.49	24.44	0	0
	1	25	24.43	24.52	24.35		0
	1	49	24.48	24.40	24.32		0
	25	0	23.48	23.65	23.41	0-1	1
	25	12	23.52	23.68	23.43		1
	25	25	23.49	23.64	23.40		1
	50	0	23.49	23.65	23.42		1
16QAM	1	0	23.69	23.83	23.56	0-1	1
	1	25	23.76	23.97	23.53		1
	1	49	23.83	23.92	23.44		1
	25	0	22.53	22.69	22.45	0-2	2
	25	12	22.55	22.74	22.48		2
	25	25	22.52	22.70	22.42		2
	50	0	22.51	22.62	22.39		2
64QAM	1	0	22.90	22.94	22.69	0-2	2
	1	25	23.00	22.97	22.66		2
	1	49	22.84	22.91	22.52		2
	25	0	21.56	21.69	21.54	0-3	3
	25	12	21.47	21.72	21.57		3
	25	25	21.42	21.68	21.52		3
	50	0	21.46	21.67	21.47		3

Table 9-14
LTE Band 26 (Cell) Conducted Powers - 5 MHz Bandwidth

LTE Band 26 (Cell) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26715 (816.5 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 27015 (846.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.28	24.52	24.23	0	0
	1	12	24.43	24.60	24.22		0
	1	24	24.53	24.43	24.17		0
	12	0	23.41	23.60	23.35	0-1	1
	12	6	23.53	23.67	23.38		1
	12	13	23.49	23.57	23.34		1
	25	0	23.49	23.60	23.37		1
16QAM	1	0	23.47	23.32	23.50	0-1	1
	1	12	23.61	23.44	23.53		1
	1	24	23.61	23.34	23.43		1
	12	0	22.46	22.59	22.39	0-2	2
	12	6	22.58	22.63	22.43		2
	12	13	22.53	22.60	22.36		2
	25	0	22.50	22.53	22.38		2
64QAM	1	0	22.34	22.74	22.87	0-2	2
	1	12	22.64	22.86	22.91		2
	1	24	22.63	22.68	22.96		2
	12	0	21.45	21.59	21.97	0-3	3
	12	6	21.55	21.62	21.96		3
	12	13	21.51	21.57	21.80		3
	25	0	21.43	21.57	21.97		3

Table 9-15
LTE Band 26 (Cell) Conducted Powers - 3 MHz Bandwidth

LTE Band 26 (Cell) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26705 (815.5 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 27025 (847.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.24	24.40	24.26	0	0
	1	7	24.29	24.48	24.21		0
	1	14	24.33	24.43	24.18		0
	8	0	23.41	23.54	23.34	0-1	1
	8	4	23.51	23.58	23.38		1
	8	7	23.46	23.50	23.30		1
	15	0	23.45	23.55	23.34		1
16QAM	1	0	23.43	23.75	23.55	0-1	1
	1	7	23.56	23.83	23.52		1
	1	14	23.53	23.71	23.45		1
	8	0	22.43	22.67	22.39	0-2	2
	8	4	22.54	22.71	22.40		2
	8	7	22.48	22.62	22.33		2
	15	0	22.43	22.59	22.31		2
64QAM	1	0	22.39	22.79	22.46	0-2	2
	1	7	22.59	22.86	22.55		2
	1	14	22.57	22.76	22.33		2
	8	0	21.44	21.67	21.37	0-3	3
	8	4	21.55	21.69	21.41		3
	8	7	21.48	21.66	21.35		3
	15	0	21.47	21.64	21.34		3

Table 9-16
LTE Band 26 (Cell) Conducted Powers -1.4 MHz Bandwidth

LTE Band 26 (Cell) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26697 (814.7 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 27033 (848.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.20	24.47	24.17	0	0
	1	2	24.33	24.58	24.23		0
	1	5	24.24	24.46	24.14		0
	3	0	24.28	24.46	24.19		0
	3	2	24.28	24.58	24.20		0
	3	3	24.24	24.52	24.15		0
	6	0	23.37	23.56	23.29	0-1	1
16QAM	1	0	23.43	23.73	23.44	0-1	1
	1	2	23.54	23.84	23.50		1
	1	5	23.45	23.68	23.37		1
	3	0	23.38	23.63	23.35		1
	3	2	23.00	23.75	23.40		1
	3	3	23.41	23.61	23.33		1
	6	0	22.40	22.61	22.34	0-2	2
64QAM	1	0	22.32	22.70	22.33	0-2	2
	1	2	22.53	22.86	22.40		2
	1	5	22.51	22.75	22.42		2
	3	0	22.37	22.69	22.32		2
	3	2	22.56	22.73	22.29		2
	3	3	22.45	22.69	22.19		2
	6	0	21.31	21.57	21.32	0-3	3

9.3.4 LTE Band 66 (AWS)

Table 9-17
LTE Band 66 (AWS) Maximum Conducted Powers - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.17	23.58	**23.69**	0	0
	1	50	23.24	23.65	23.59		0
	1	99	23.38	23.63	23.57		0
	50	0	22.42	22.82	22.84	0-1	1
	50	25	22.37	22.83	**22.87**		1
	50	50	22.45	22.81	22.79		1
	100	0	22.39	22.84	22.83		1
16QAM	1	0	22.48	22.89	22.87	0-1	1
	1	50	22.55	22.81	22.86		1
	1	99	22.65	22.83	22.86		1
	50	0	21.41	21.82	21.86	0-2	2
	50	25	21.40	21.87	21.84		2
	50	50	21.44	21.84	21.80		2
	100	0	21.42	21.85	21.83		2
64QAM	1	0	21.49	21.86	21.87	0-2	2
	1	50	21.48	21.88	21.84		2
	1	99	21.61	21.84	21.80		2
	50	0	20.43	20.81	20.87	0-3	3
	50	25	20.41	20.79	20.83		3
	50	50	20.46	20.81	20.80		3
	100	0	20.44	20.86	20.85		3

Table 9-18
LTE Band 66 (AWS) Maximum Conducted Powers - 15 MHz Bandwidth

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132047 (1717.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132597 (1772.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.10	23.57	23.89	0	0
	1	36	23.09	23.65	23.82		0
	1	74	23.18	23.74	23.78		0
	36	0	22.29	22.89	23.00	0-1	1
	36	18	22.27	22.87	23.00		1
	36	37	22.21	22.84	22.97		1
	75	0	22.25	22.88	22.99		1
16QAM	1	0	21.96	22.74	22.79	0-1	1
	1	36	21.95	22.94	22.73		1
	1	74	22.09	22.94	22.69		1
	36	0	21.30	21.91	21.99	0-2	2
	36	18	21.26	21.87	21.98		2
	36	37	21.22	21.82	21.97		2
	75	0	21.27	21.87	22.00		2
64QAM	1	0	21.27	21.92	22.00	0-2	2
	1	36	21.29	21.93	21.98		2
	1	74	21.30	21.95	21.96		2
	36	0	20.50	20.92	20.97	0-3	3
	36	18	20.31	20.91	21.00		3
	36	37	20.27	20.89	20.99		3
	75	0	20.31	20.90	21.00		3

Table 9-19
LTE Band 66 (AWS) Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.00	23.57	23.78	0	0
	1	25	22.96	23.57	23.77		0
	1	49	23.01	23.61	23.78		0
	25	0	22.14	22.71	22.87	0-1	1
	25	12	22.13	22.73	22.86		1
	25	25	22.09	22.68	22.80		1
	50	0	22.11	22.71	22.85		1
16QAM	1	0	22.48	22.50	23.00	0-1	1
	1	25	22.56	22.56	22.99		1
	1	49	22.40	22.56	22.97		1
	25	0	21.20	21.77	21.88	0-2	2
	25	12	21.20	21.77	21.87		2
	25	25	21.14	21.74	21.81		2
	50	0	21.09	21.75	21.85		2
64QAM	1	0	21.37	21.87	21.95	0-2	2
	1	25	21.44	21.90	21.99		2
	1	49	21.46	21.90	22.00		2
	25	0	20.19	20.85	20.92	0-3	3
	25	12	20.18	20.79	20.90		3
	25	25	20.14	20.76	20.86		3
	50	0	20.14	20.74	20.87		3

Table 9-20
LTE Band 66 (AWS) Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 66 (AWS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131997 (1712.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132647 (1777.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.93	23.54	23.76	0	0
	1	12	22.98	23.63	23.83		0
	1	24	23.03	23.65	23.87		0
	12	0	22.02	22.66	22.81	0-1	1
	12	6	22.13	22.70	22.85		1
	12	13	22.11	22.74	22.90		1
	25	0	22.13	22.68	22.81		1
16QAM	1	0	22.41	22.47	22.93	0-1	1
	1	12	22.36	22.59	22.74		1
	1	24	22.42	22.99	22.91		1
	12	0	21.06	21.71	21.78	0-2	2
	12	6	21.18	21.74	21.83		2
	12	13	21.16	21.77	21.88		2
	25	0	21.17	21.66	21.83		2
64QAM	1	0	21.31	21.94	22.00	0-2	2
	1	12	21.44	22.00	21.98		2
	1	24	21.51	21.94	21.99		2
	12	0	20.02	20.70	20.79	0-3	3
	12	6	20.15	20.75	20.84		3
	12	13	20.17	20.81	20.79		3
	25	0	20.07	20.71	20.81		3

Table 9-21
LTE Band 66 (AWS) Maximum Conducted Powers - 3 MHz Bandwidth

LTE Band 66 (AWS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131987 (1711.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132657 (1778.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.96	23.48	23.52	0	0
	1	7	23.03	23.56	23.59		0
	1	14	23.08	23.61	23.66		0
	8	0	22.00	22.65	22.72	0-1	1
	8	4	22.11	22.67	22.84		1
	8	7	22.09	22.68	22.79		1
	15	0	22.06	22.65	22.81		1
16QAM	1	0	22.12	23.00	22.52	0-1	1
	1	7	22.23	22.86	22.55		1
	1	14	22.55	22.89	22.60		1
	8	0	21.03	21.69	21.77	0-2	2
	8	4	21.13	21.70	21.88		2
	8	7	21.11	21.73	21.87		2
	15	0	21.03	21.67	21.78		2
64QAM	1	0	21.76	21.70	21.87	0-2	2
	1	7	21.75	21.80	21.98		2
	1	14	21.76	21.72	21.92		2
	8	0	20.89	20.61	20.78	0-3	3
	8	4	20.79	20.65	20.89		3
	8	7	20.75	20.65	20.81		3
	15	0	20.85	20.64	20.83		3

Table 9-22
LTE Band 66 (AWS) Maximum Conducted Powers -1.4 MHz Bandwidth

LTE Band 66 (AWS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131979 (1710.7 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132665 (1779.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.83	23.41	23.55	0	0
	1	2	22.90	23.60	23.65		0
	1	5	22.87	23.56	23.64		0
	3	0	22.83	23.47	23.60		0
	3	2	22.91	23.55	23.70		0
	3	3	22.88	23.51	23.64		0
	6	0	21.95	22.55	22.70	0-1	1
16QAM	1	0	22.02	22.82	22.84	0-1	1
	1	2	22.05	22.90	22.94		1
	1	5	22.01	22.86	22.94		1
	3	0	21.93	22.58	22.70		1
	3	2	21.99	22.60	22.81		1
	3	3	21.96	22.47	22.78		1
	6	0	21.04	21.66	21.70	0-2	2
64QAM	1	0	21.25	21.63	21.88	0-2	2
	1	2	21.35	21.82	21.98		2
	1	5	21.29	21.74	21.77		2
	3	0	21.16	21.34	21.87		2
	3	2	21.18	21.82	21.98		2
	3	3	21.14	21.75	21.91		2
	6	0	20.07	20.54	20.79	0-3	3

Table 9-23
LTE Band 66 (AWS) Reduced Conducted Powers - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			19.12				
QPSK	1	0	18.79	19.02	**19.32**	0	0
	1	50	18.77	19.05	19.18		0
	1	99	18.91	19.04	19.21		0
	50	0	19.00	19.27	**19.36**	0-1	0
	50	25	18.98	19.28	19.35		0
	50	50	18.92	19.21	19.32		0
	100	0	18.95	19.31	19.30		0
16QAM	1	0	19.01	19.28	19.42	0-1	0
	1	50	19.23	19.27	19.45		0
	1	99	19.25	19.42	19.42		0
	50	0	18.94	19.25	19.36	0-2	0
	50	25	18.98	19.22	19.29		0
	50	50	18.99	19.22	19.32		0
	100	0	18.96	19.23	19.34		0
64QAM	1	0	18.92	19.30	19.47	0-2	0
	1	50	18.98	19.37	19.44		0
	1	99	19.17	19.31	19.40		0
	50	0	19.02	19.32	19.42	0-3	0
	50	25	18.96	19.29	19.40		0
	50	50	18.99	19.28	19.39		0
	100	0	18.98	19.30	19.39		0

Table 9-24
LTE Band 66 (AWS) Reduced Conducted Powers - 15 MHz Bandwidth

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132047 (1717.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132597 (1772.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.66	19.26	19.35	0	0
	1	36	18.60	19.22	19.29		0
	1	74	18.69	19.15	19.27		0
	36	0	18.87	19.40	19.35	0-1	0
	36	18	18.83	19.38	19.31		0
	36	37	18.80	19.35	19.25		0
	75	0	18.86	19.39	19.26		0
16QAM	1	0	19.34	19.04	19.38	0-1	0
	1	36	19.30	19.10	19.29		0
	1	74	19.35	19.08	19.19		0
	36	0	18.93	19.40	19.32	0-2	0
	36	18	18.85	19.35	19.28		0
	36	37	18.81	19.31	19.25		0
	75	0	18.86	19.37	19.26		0
64QAM	1	0	18.90	18.93	19.41	0-2	0
	1	36	19.02	18.98	19.35		0
	1	74	19.09	18.94	19.37		0
	36	0	18.87	19.41	19.34	0-3	0
	36	18	18.85	19.38	19.30		0
	36	37	18.80	19.34	19.24		0
	75	0	18.84	19.35	19.26		0

Table 9-25
LTE Band 66 (AWS) Reduced Conducted Powers - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.57	19.08	19.20	0	0
	1	25	18.47	19.02	19.19		0
	1	49	18.48	19.09	19.25		0
	25	0	18.63	19.20	19.34	0-1	0
	25	12	18.64	19.20	19.35		0
	25	25	18.59	19.17	19.28		0
	50	0	18.61	19.19	19.30		0
16QAM	1	0	18.96	19.30	19.29	0-1	0
	1	25	19.11	19.27	19.14		0
	1	49	18.96	19.07	19.16		0
	25	0	18.70	19.21	19.40	0-2	0
	25	12	18.70	19.20	19.38		0
	25	25	18.65	19.18	19.34		0
	50	0	18.63	19.18	19.33		0
64QAM	1	0	18.45	18.97	19.50	0-2	0
	1	25	18.58	18.95	19.49		0
	1	49	18.61	18.94	19.41		0
	25	0	18.63	19.26	19.36	0-3	0
	25	12	18.61	19.25	19.35		0
	25	25	18.56	19.21	19.29		0
	50	0	18.64	19.28	19.35		0

Table 9-26
LTE Band 66 (AWS) Reduced Conducted Powers - 5 MHz Bandwidth

LTE Band 66 (AWS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131997 (1712.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132647 (1777.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.58	18.94	19.16	0	0
	1	12	18.52	19.08	19.22		0
	1	24	18.78	19.18	19.17		0
	12	0	18.79	19.08	19.23	0-1	0
	12	6	18.87	19.14	19.27		0
	12	13	18.91	19.19	19.31		0
	25	0	18.89	19.14	19.24		0
16QAM	1	0	19.01	19.18	19.45	0-1	0
	1	12	19.12	19.29	19.50		0
	1	24	19.20	19.39	19.50		0
	12	0	18.85	19.16	19.27	0-2	0
	12	6	18.93	19.15	19.32		0
	12	13	18.90	19.25	19.37		0
	25	0	18.91	19.16	19.32		0
64QAM	1	0	18.70	19.27	19.35	0-2	0
	1	12	18.81	19.39	19.40		0
	1	24	18.93	19.40	19.25		0
	12	0	18.79	19.07	19.20	0-3	0
	12	6	18.89	19.12	19.25		0
	12	13	18.87	19.17	19.29		0
	25	0	18.86	19.18	19.27		0

Table 9-27
LTE Band 66 (AWS) Reduced Conducted Powers - 3 MHz Bandwidth

LTE Band 66 (AWS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131987 (1711.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132657 (1778.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.63	18.93	19.15	0	0
	1	7	18.67	19.01	19.18		0
	1	14	18.73	19.02	19.16		0
	8	0	18.73	19.11	19.17	0-1	0
	8	4	18.84	19.18	19.25		0
	8	7	18.80	19.18	19.24		0
	15	0	18.81	19.14	19.24		0
16QAM	1	0	19.25	19.50	19.05	0-1	0
	1	7	19.34	19.48	19.11		0
	1	14	19.37	19.50	19.15		0
	8	0	18.80	19.15	19.23	0-2	0
	8	4	18.88	19.20	19.35		0
	8	7	18.86	19.36	19.31		0
	15	0	18.85	19.14	19.20		0
64QAM	1	0	18.82	19.02	19.47	0-2	0
	1	7	18.90	19.14	19.50		0
	1	14	18.82	19.15	19.47		0
	8	0	18.76	19.09	19.20	0-3	0
	8	4	18.86	19.12	19.31		0
	8	7	18.82	19.14	19.29		0
	15	0	18.85	19.08	19.23		0

Table 9-28
LTE Band 66 (AWS) Reduced Conducted Powers -1.4 MHz Bandwidth

LTE Band 66 (AWS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131979 (1710.7 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132665 (1779.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.63	18.92	19.02	0	0
	1	2	18.70	19.02	19.16		0
	1	5	18.62	18.97	19.12		0
	3	0	18.68	18.99	19.06		0
	3	2	18.73	19.08	19.17		0
	3	3	18.64	19.04	19.14		0
	6	0	18.73	18.95	19.15	0-1	0
16QAM	1	0	18.82	19.50	19.16	0-1	0
	1	2	18.89	19.46	19.31		0
	1	5	18.81	19.40	19.19		0
	3	0	18.75	19.20	19.29		0
	3	2	18.80	19.34	19.48		0
	3	3	18.77	19.26	19.40		0
	6	0	18.87	19.18	19.29	0-2	0
64QAM	1	0	18.94	19.01	19.44	0-2	0
	1	2	19.04	19.16	19.50		0
	1	5	18.98	19.10	19.42		0
	3	0	18.73	19.00	19.22		0
	3	2	18.79	19.11	19.31		0
	3	3	18.72	19.05	19.26		0
	6	0	18.74	19.11	19.18	0-3	0

9.3.5 LTE Band 25 (PCS)

Table 9-29
LTE Band 25 (PCS) Maximum Conducted Powers - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.46	23.58	23.68	0	0
	1	50	23.37	23.65	23.65		0
	1	99	23.48	**23.71**	23.68		0
	50	0	22.49	22.70	22.68	0-1	1
	50	25	22.53	22.75	22.75		1
	50	50	22.51	**22.76**	22.74		1
	100	0	22.51	22.73	22.72		1
16QAM	1	0	22.62	22.81	22.81	0-1	1
	1	50	22.57	22.86	22.86		1
	1	99	22.68	22.87	22.88		1
	50	0	21.48	21.69	21.73	0-2	2
	50	25	21.52	21.76	21.78		2
	50	50	21.51	21.70	21.75		2
	100	0	21.48	21.73	21.70		2
64QAM	1	0	21.68	21.76	21.84	0-2	2
	1	50	21.63	21.84	21.72		2
	1	99	21.74	21.82	21.83		2
	50	0	20.54	20.70	20.72	0-3	3
	50	25	20.57	20.74	20.79		3
	50	50	20.56	20.32	20.73		3
	100	0	20.51	20.85	20.74		3

Table 9-30
LTE Band 25 (PCS) Maximum Conducted Powers - 15 MHz Bandwidth

LTE Band 25 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26115 (1857.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26615 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.49	23.85	23.86	0	0
	1	36	23.51	23.80	23.78		0
	1	74	23.52	23.83	23.88		0
	36	0	22.62	22.89	22.88	0-1	1
	36	18	22.66	22.93	22.94		1
	36	37	22.65	22.94	22.95		1
	75	0	22.65	22.91	22.90		1
16QAM	1	0	22.79	23.00	23.00	0-1	1
	1	36	22.77	22.98	22.99		1
	1	74	22.76	22.97	23.00		1
	36	0	21.62	21.90	21.84	0-2	2
	36	18	21.66	21.94	21.91		2
	36	37	21.66	21.97	21.93		2
	75	0	21.65	21.90	21.89		2
64QAM	1	0	21.81	22.00	21.99	0-2	2
	1	36	21.79	21.99	21.97		2
	1	74	21.78	21.91	22.00		2
	36	0	20.62	20.88	20.86	0-3	3
	36	18	20.68	20.94	20.94		3
	36	37	20.67	20.82	20.73		3
	75	0	20.64	20.92	20.93		3

Table 9-31
LTE Band 25 (PCS) Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 25 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26090 (1855.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26640 (1910.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.48	23.68	23.66	0	0
	1	25	23.42	23.69	23.67		0
	1	49	23.44	23.72	23.58		0
	25	0	22.59	22.73	22.77	0-1	1
	25	12	22.60	22.75	22.78		1
	25	25	22.60	22.77	22.79		1
	50	0	22.61	22.75	22.78		1
16QAM	1	0	23.00	23.00	23.00	0-1	1
	1	25	22.99	22.99	22.92		1
	1	49	22.98	23.00	22.57		1
	25	0	21.55	21.81	21.78	0-2	2
	25	12	21.56	21.85	21.79		2
	25	25	21.57	21.84	21.80		2
	50	0	21.60	21.77	21.80		2
64QAM	1	0	21.96	21.85	21.92	0-2	2
	1	25	21.59	21.88	21.92		2
	1	49	21.57	21.85	21.97		2
	25	0	20.59	20.70	20.71	0-3	3
	25	12	20.61	20.72	20.67		3
	25	25	20.59	20.74	20.53		3
	50	0	20.58	20.78	20.77		3

Table 9-32
LTE Band 25 (PCS) Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 25 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26065 (1852.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26665 (1912.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.50	23.52	23.66	0	0
	1	12	23.55	23.72	23.75		0
	1	24	23.55	23.76	23.78		0
	12	0	22.60	22.67	22.69	0-1	1
	12	6	22.65	22.75	22.82		1
	12	13	22.64	22.80	22.84		1
	25	0	22.61	22.69	22.78		1
16QAM	1	0	22.55	22.93	22.63	0-1	1
	1	12	22.81	23.00	22.81		1
	1	24	22.80	22.99	23.00		1
	12	0	21.60	21.75	21.77	0-2	2
	12	6	21.67	21.82	21.89		2
	12	13	21.66	21.86	21.91		2
	25	0	21.61	21.74	21.84		2
64QAM	1	0	21.93	21.97	21.71	0-2	2
	1	12	22.00	21.99	21.85		2
	1	24	21.99	22.00	21.99		2
	12	0	20.56	20.69	20.47	0-3	3
	12	6	20.55	20.76	20.54		3
	12	13	20.55	20.86	20.68		3
	25	0	20.62	20.68	20.51		3

Table 9-33
LTE Band 25 (PCS) Maximum Conducted Powers - 3 MHz Bandwidth

LTE Band 25 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26055 (1851.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26675 (1913.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.41	23.54	23.45	0	0
	1	7	23.47	23.65	23.61		0
	1	14	23.41	23.70	23.62		0
	8	0	22.55	22.69	22.72	0-1	1
	8	4	22.61	22.74	22.77		1
	8	7	22.58	22.76	22.81		1
	15	0	22.55	22.69	22.70		1
16QAM	1	0	22.62	22.52	22.40	0-1	1
	1	7	22.50	22.69	22.63		1
	1	14	22.50	22.75	22.88		1
	8	0	21.57	21.71	21.81	0-2	2
	8	4	21.64	21.78	21.86		2
	8	7	21.60	21.79	21.90		2
	15	0	21.59	21.73	21.67		2
64QAM	1	0	21.72	21.99	21.81	0-2	2
	1	7	21.85	22.00	21.95		2
	1	14	21.83	21.99	21.97		2
	8	0	20.71	20.78	20.57	0-3	3
	8	4	20.79	20.89	20.72		3
	8	7	20.73	20.91	20.78		3
	15	0	20.61	20.70	20.63		3

Table 9-34
LTE Band 25 (PCS) Maximum Conducted Powers -1.4 MHz Bandwidth

LTE Band 25 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26047 (1850.7 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26683 (1914.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.31	23.51	23.59	0	0
	1	2	23.43	23.68	23.72		0
	1	5	23.40	23.62	23.66		0
	3	0	23.43	23.56	23.67		0
	3	2	23.48	23.69	23.69		0
	3	3	23.44	23.64	23.67		0
	6	0	22.48	22.62	22.70	0-1	1
16QAM	1	0	22.42	22.52	22.80	0-1	1
	1	2	22.58	22.65	22.95		1
	1	5	22.47	22.60	22.88		1
	3	0	22.55	22.69	22.97		1
	3	2	22.59	22.84	23.00		1
	3	3	22.63	22.88	22.99		1
	6	0	21.61	21.57	21.87	0-2	2
64QAM	1	0	21.80	21.82	21.86	0-2	2
	1	2	21.89	22.00	21.95		2
	1	5	21.84	21.94	21.88		2
	3	0	21.79	21.92	21.88		2
	3	2	21.84	21.97	21.96		2
	3	3	21.74	21.75	21.90		2
	6	0	20.62	20.62	20.79	0-3	3

Table 9-35
LTE Band 25 (PCS) Reduced Conducted Powers - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.41	19.55	19.64	0	0
	1	50	19.37	19.58	19.63		0
	1	99	19.43	19.54	**19.65**		0
	50	0	19.46	19.64	19.71	0-1	0
	50	25	19.50	19.68	19.79		0
	50	50	19.50	19.72	**19.80**		0
	100	0	19.52	19.55	19.56		0
16QAM	1	0	19.67	19.71	19.82	0-1	0
	1	50	19.56	19.78	19.83		0
	1	99	19.72	19.70	19.76		0
	50	0	19.44	19.65	19.68	0-2	0
	50	25	19.53	19.72	19.77		0
	50	50	19.48	19.74	19.74		0
	100	0	19.51	19.72	19.72		0
64QAM	1	0	19.72	19.76	19.77	0-2	0
	1	50	19.62	19.73	19.78		0
	1	99	19.79	19.71	19.83		0
	50	0	19.50	19.71	19.75	0-3	0
	50	25	19.58	19.77	19.76		0
	50	50	19.48	19.77	19.77		0
	100	0	19.53	19.75	19.74		0

Table 9-36
LTE Band 25 (PCS) Reduced Conducted Powers - 15 MHz Bandwidth

LTE Band 25 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26115 (1857.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26615 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.29	19.59	19.55	0	0
	1	36	19.29	19.53	19.49		0
	1	74	19.31	19.53	19.50		0
	36	0	19.42	19.62	19.59	0-1	0
	36	18	19.49	19.67	19.67		0
	36	37	19.46	19.65	19.71		0
	75	0	19.45	19.63	19.68		0
16QAM	1	0	19.59	19.84	19.84	0-1	0
	1	36	19.59	19.78	19.78		0
	1	74	19.56	19.73	19.79		0
	36	0	19.44	19.58	19.65	0-2	0
	36	18	19.50	19.66	19.74		0
	36	37	19.49	19.67	19.74		0
	75	0	19.48	19.62	19.70		0
64QAM	1	0	19.43	19.75	19.72	0-2	0
	1	36	19.44	19.69	19.66		0
	1	74	19.40	19.68	19.70		0
	36	0	19.41	19.62	19.62	0-3	0
	36	18	19.47	19.69	19.70		0
	36	37	19.43	19.70	19.71		0
	75	0	19.46	19.66	19.68		0

Table 9-37
LTE Band 25 (PCS) Reduced Conducted Powers - 10 MHz Bandwidth

LTE Band 25 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26090 (1855.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26640 (1910.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.24	19.35	19.31	0	0
	1	25	19.18	19.34	19.36		0
	1	49	19.12	19.35	19.32		0
	25	0	19.32	19.44	19.45	0-1	0
	25	12	19.34	19.46	19.48		0
	25	25	19.32	19.46	19.49		0
	50	0	19.34	19.46	19.47		0
16QAM	1	0	19.48	19.64	19.56	0-1	0
	1	25	19.45	19.60	19.57		0
	1	49	19.37	19.59	19.56		0
	25	0	19.32	19.45	19.44	0-2	0
	25	12	19.35	19.49	19.48		0
	25	25	19.33	19.48	19.48		0
	50	0	19.31	19.47	19.48		0
64QAM	1	0	19.43	19.70	19.55	0-2	0
	1	25	19.42	19.63	19.59		0
	1	49	19.36	19.62	19.63		0
	25	0	19.31	19.48	19.47	0-3	0
	25	12	19.33	19.52	19.51		0
	25	25	19.31	19.52	19.52		0
	50	0	19.33	19.52	19.51		0

Table 9-38
LTE Band 25 (PCS) Reduced Conducted Powers - 5 MHz Bandwidth

LTE Band 25 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26065 (1852.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26665 (1912.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.20	19.33	19.34	0	0
	1	12	19.29	19.45	19.41		0
	1	24	19.28	19.51	19.43		0
	12	0	19.32	19.45	19.44	0-1	0
	12	6	19.39	19.50	19.58		0
	12	13	19.41	19.57	19.57		0
	25	0	19.39	19.47	19.55		0
16QAM	1	0	19.47	19.60	19.58	0-1	0
	1	12	19.59	19.76	19.65		0
	1	24	19.55	19.76	19.64		0
	12	0	19.38	19.48	19.46	0-2	0
	12	6	19.43	19.56	19.60		0
	12	13	19.42	19.61	19.60		0
	25	0	19.37	19.50	19.54		0
64QAM	1	0	19.51	19.63	19.49	0-2	0
	1	12	19.61	19.73	19.57		0
	1	24	19.57	19.77	19.57		0
	12	0	19.35	19.48	19.43	0-3	0
	12	6	19.41	19.53	19.56		0
	12	13	19.38	19.60	19.53		0
	25	0	19.39	19.53	19.54		0

Table 9-39
LTE Band 25 (PCS) Reduced Conducted Powers - 3 MHz Bandwidth

LTE Band 25 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26055 (1851.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26675 (1913.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.15	19.29	19.36	0	0
	1	7	19.24	19.44	19.49		0
	1	14	19.20	19.48	19.51		0
	8	0	19.34	19.49	19.49	0-1	0
	8	4	19.39	19.54	19.56		0
	8	7	19.34	19.56	19.59		0
	15	0	19.34	19.51	19.52		0
16QAM	1	0	19.42	19.60	19.55	0-1	0
	1	7	19.50	19.76	19.71		0
	1	14	19.53	19.74	19.69		0
	8	0	19.38	19.52	19.55	0-2	0
	8	4	19.42	19.61	19.62		0
	8	7	19.39	19.59	19.61		0
	15	0	19.34	19.51	19.52		0
64QAM	1	0	19.31	19.42	19.46	0-2	0
	1	7	19.38	19.62	19.62		0
	1	14	19.43	19.64	19.65		0
	8	0	19.29	19.47	19.50	0-3	0
	8	4	19.36	19.52	19.55		0
	8	7	19.32	19.56	19.60		0
	15	0	19.34	19.49	19.51		0

Table 9-40
LTE Band 25 (PCS) Reduced Conducted Powers -1.4 MHz Bandwidth

LTE Band 25 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26047 (1850.7 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26683 (1914.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.19	19.34	19.38	0	0
	1	2	19.28	19.48	19.48		0
	1	5	19.24	19.42	19.42		0
	3	0	19.22	19.33	19.41		0
	3	2	19.30	19.48	19.49		0
	3	3	19.22	19.42	19.43		0
	6	0	19.33	19.43	19.53	0-1	0
16QAM	1	0	19.46	19.63	19.67	0-1	0
	1	2	19.57	19.77	19.73		0
	1	5	19.50	19.69	19.67		0
	3	0	19.40	19.54	19.56		0
	3	2	19.46	19.62	19.64		0
	3	3	19.41	19.59	19.58		0
	6	0	19.38	19.51	19.61	0-2	0
64QAM	1	0	19.35	19.52	19.50	0-2	0
	1	2	19.46	19.64	19.61		0
	1	5	19.37	19.59	19.54		0
	3	0	19.34	19.48	19.50		0
	3	2	19.39	19.55	19.59		0
	3	3	19.36	19.52	19.50		0
	6	0	19.31	19.44	19.52	0-3	0

9.3.6 LTE Band 41

Table 9-41
LTE Band 41 Maximum Conducted Powers - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	23.38	23.21	**23.40**	23.26	23.24	0	0
	1	50	23.26	23.22	23.31	23.22	23.30		0
	1	99	23.17	23.18	23.17	23.01	23.39		0
	50	0	22.49	22.33	**22.54**	22.44	22.47	0-1	1
	50	25	22.50	22.27	22.52	22.34	22.53		1
	50	50	22.44	22.23	22.45	22.26	22.52		1
	100	0	22.49	22.28	22.49	22.33	22.49		1
16QAM	1	0	22.48	22.32	22.42	22.43	22.35	0-1	1
	1	50	22.36	22.15	22.31	22.33	22.36		1
	1	99	22.31	22.17	22.20	22.14	22.46		1
	50	0	21.53	21.35	21.52	21.40	21.47	0-2	2
	50	25	21.57	21.30	21.48	21.38	21.51		2
	50	50	21.50	21.26	21.50	21.28	21.55		2
	100	0	21.54	21.34	21.52	21.38	21.52		2
64QAM	1	0	21.19	21.01	21.10	21.16	21.07	0-2	2
	1	50	21.04	20.90	21.03	21.02	21.09		2
	1	99	20.99	20.88	20.89	20.90	21.17		2
	50	0	20.56	20.39	20.59	20.43	20.55	0-3	3
	50	25	20.53	20.40	20.56	20.43	20.62		3
	50	50	20.49	20.34	20.48	20.40	20.58		3
	100	0	20.52	20.38	20.51	20.36	20.54		3

Table 9-42
LTE Band 41 Maximum Conducted Powers - 15 MHz Bandwidth

LTE Band 41 15 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	23.29	23.21	23.42	23.69	23.36	0	0
	1	36	23.21	23.30	23.45	23.59	23.41		0
	1	74	23.27	23.25	23.45	23.50	23.51		0
	36	0	22.41	22.48	22.63	22.68	22.52	0-1	1
	36	18	22.45	22.50	22.66	22.66	22.58		1
	36	37	22.44	22.44	22.66	22.60	22.57		1
	75	0	22.44	22.47	22.66	22.65	22.57		1
16QAM	1	0	22.41	22.41	22.56	22.67	22.50	0-1	1
	1	36	22.32	22.38	22.52	22.62	22.51		1
	1	74	22.40	22.31	22.57	22.52	22.59		1
	36	0	21.40	21.48	21.59	21.67	21.54	0-2	2
	36	18	21.43	21.50	21.64	21.66	21.57		2
	36	37	21.45	21.46	21.64	21.60	21.55		2
	75	0	21.44	21.49	21.64	21.66	21.57		2
64QAM	1	0	21.50	21.57	21.67	21.93	21.66	0-2	2
	1	36	21.45	21.50	21.65	21.86	21.69		2
	1	74	21.49	21.47	21.72	21.78	21.77		2
	36	0	20.36	20.46	20.57	20.71	20.53	0-3	3
	36	18	20.44	20.49	20.62	20.65	20.57		3
	36	37	20.43	20.43	20.64	20.59	20.55		3
	75	0	20.44	20.48	20.63	20.67	20.59		3

Table 9-43
LTE Band 41 Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 41 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	23.15	23.22	23.27	23.26	23.13	0	0
	1	25	23.23	23.21	23.35	23.45	23.30		0
	1	49	23.14	23.23	23.33	23.35	23.17		0
	25	0	22.29	22.39	22.50	22.54	22.47	0-1	1
	25	12	22.30	22.40	22.53	22.57	22.47		1
	25	25	22.26	22.36	22.49	22.53	22.40		1
	50	0	22.29	22.41	22.53	22.56	22.48		1
16QAM	1	0	22.19	22.31	22.47	22.53	22.34	0-1	1
	1	25	22.23	22.31	22.43	22.51	22.40		1
	1	49	22.19	22.30	22.42	22.49	22.28		1
	25	0	21.25	21.34	21.47	21.52	21.42	0-2	2
	25	12	21.25	21.36	21.47	21.50	21.43		2
	25	25	21.20	21.30	21.43	21.46	21.37		2
	50	0	21.27	21.38	21.52	21.55	21.47		2
64QAM	1	0	21.01	21.36	21.53	21.25	21.64	0-2	2
	1	25	21.09	21.44	21.57	21.27	21.58		2
	1	49	21.01	21.39	21.55	21.31	21.53		2
	25	0	20.29	20.45	20.54	20.60	20.51	0-3	3
	25	12	20.32	20.43	20.56	20.60	20.52		3
	25	25	20.27	20.39	20.52	20.55	20.47		3
	50	0	20.31	20.42	20.54	20.54	20.47		3

Table 9-44
LTE Band 41 Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	23.15	23.30	23.36	23.38	23.14	0	0
	1	12	23.17	23.29	23.39	23.44	23.25		0
	1	24	23.17	23.30	23.41	23.42	23.24		0
	12	0	22.30	22.37	22.40	22.42	22.34	0-1	1
	12	6	22.33	22.41	22.46	22.46	22.40		1
	12	13	22.32	22.40	22.48	22.49	22.39		1
	25	0	22.30	22.39	22.45	22.49	22.38		1
16QAM	1	0	22.25	22.33	22.44	22.46	22.38	0-1	1
	1	12	22.30	22.36	22.46	22.53	22.36		1
	1	24	22.30	22.38	22.47	22.50	22.50		1
	12	0	21.30	21.38	21.42	21.45	21.36	0-2	2
	12	6	21.35	21.43	21.44	21.45	21.45		2
	12	13	21.33	21.40	21.48	21.49	21.41		2
	25	0	21.26	21.34	21.39	21.43	21.35		2
64QAM	1	0	21.35	21.38	21.52	21.63	21.33	0-2	2
	1	12	21.39	21.46	21.60	21.69	21.40		2
	1	24	21.39	21.47	21.57	21.72	21.35		2
	12	0	20.28	20.35	20.37	20.42	20.33	0-3	3
	12	6	20.28	20.39	20.44	20.43	20.35		3
	12	13	20.26	20.39	20.48	20.49	20.37		3
	25	0	20.32	20.43	20.47	20.51	20.33		3

Table 9-45
LTE Band 41 Reduced Conducted Powers - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	20.63	20.67	20.45	**20.77**	20.59	0	0
	1	50	20.72	20.61	20.48	20.51	20.70		0
	1	99	20.66	20.53	20.44	20.34	20.76		0
	50	0	20.63	20.57	20.63	20.67	20.76	0-1	0
	50	25	20.71	20.63	20.68	**20.80**	20.73		0
	50	50	20.66	20.49	20.63	20.58	20.74		0
	100	0	20.63	20.54	20.62	20.66	20.65		0
16QAM	1	0	20.93	20.88	20.72	20.76	20.82	0-1	0
	1	50	20.97	20.86	20.72	20.70	20.96		0
	1	99	20.90	20.82	20.62	20.52	20.97		0
	50	0	20.68	20.58	20.62	20.62	20.63	0-2	0
	50	25	20.73	20.58	20.66	20.64	20.72		0
	50	50	20.70	20.50	20.63	20.54	20.73		0
	100	0	20.69	20.54	20.62	20.60	20.68		0
64QAM	1	0	20.47	20.35	20.82	20.84	20.47	0-2	0
	1	50	20.48	20.33	20.85	20.87	20.43		0
	1	99	20.37	20.27	20.77	20.68	20.57		0
	50	0	20.70	20.58	20.61	20.66	20.66	0-3	0
	50	25	20.72	20.62	20.63	20.65	20.75		0
	50	50	20.71	20.50	20.63	20.58	20.76		0
	100	0	20.74	20.59	20.66	20.63	20.77		0

Table 9-46
LTE Band 41 Reduced Conducted Powers - 15 MHz Bandwidth

LTE Band 41 15 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	20.63	20.51	20.59	20.63	20.55	0	0
	1	36	20.63	20.56	20.61	20.65	20.61		0
	1	74	20.61	20.34	20.56	20.58	20.74		0
	36	0	20.72	20.54	20.71	20.72	20.78	0-1	0
	36	18	20.77	20.63	20.74	20.75	20.78		0
	36	37	20.77	20.56	20.71	20.72	20.83		0
	75	0	20.76	20.57	20.69	20.67	20.79		0
16QAM	1	0	20.72	20.54	20.68	20.64	20.63	0-1	0
	1	36	20.67	20.53	20.69	20.36	20.69		0
	1	74	20.65	20.43	20.64	20.20	20.84		0
	36	0	20.69	20.58	20.71	20.73	20.71	0-2	0
	36	18	20.77	20.59	20.77	20.77	20.78		0
	36	37	20.78	20.52	20.76	20.72	20.78		0
	75	0	20.70	20.51	20.70	20.68	20.72		0
64QAM	1	0	20.60	20.33	20.53	20.83	20.53	0-2	0
	1	36	20.55	20.35	20.53	20.83	20.48		0
	1	74	20.51	20.23	20.45	20.67	20.57		0
	36	0	20.75	20.58	20.71	20.80	20.73	0-3	0
	36	18	20.80	20.62	20.77	20.81	20.76		0
	36	37	20.81	20.56	20.75	20.75	20.79		0
	75	0	20.77	20.54	20.73	20.74	20.75		0

Table 9-47
LTE Band 41 Reduced Conducted Powers - 10 MHz Bandwidth

LTE Band 41 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	20.58	20.48	20.57	20.49	20.55	0	0
	1	25	20.46	20.35	20.47	20.51	20.38		0
	1	49	20.49	20.40	20.45	20.42	20.43		0
	25	0	20.60	20.51	20.61	20.61	20.59	0-1	0
	25	12	20.63	20.52	20.61	20.63	20.63		0
	25	25	20.60	20.46	20.56	20.60	20.57		0
	50	0	20.62	20.51	20.56	20.60	20.61		0
16QAM	1	0	20.74	20.53	20.58	20.55	20.62	0-1	0
	1	25	20.59	20.44	20.53	20.53	20.51		0
	1	49	20.67	20.40	20.46	20.55	20.58		0
	25	0	20.66	20.50	20.59	20.61	20.61	0-2	0
	25	12	20.68	20.52	20.60	20.61	20.63		0
	25	25	20.63	20.48	20.54	20.54	20.58		0
	50	0	20.66	20.46	20.62	20.60	20.63		0
64QAM	1	0	20.51	20.20	20.36	20.10	20.52	0-2	0
	1	25	20.26	20.17	20.32	20.09	20.26		0
	1	49	20.31	20.07	20.36	20.03	20.32		0
	25	0	20.61	20.48	20.58	20.62	20.56	0-3	0
	25	12	20.60	20.48	20.62	20.63	20.65		0
	25	25	20.62	20.42	20.55	20.58	20.58		0
	50	0	20.67	20.52	20.63	20.61	20.60		0

Table 9-48
LTE Band 41 Reduced Conducted Powers - 5 MHz Bandwidth

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	20.45	20.49	20.50	20.50	20.55	0	0
	1	12	20.49	20.52	20.53	20.55	20.58		0
	1	24	20.49	20.53	20.54	20.57	20.62		0
	12	0	20.60	20.56	20.57	20.57	20.60	0-1	0
	12	6	20.62	20.57	20.58	20.58	20.64		0
	12	13	20.61	20.55	20.60	20.64	20.67		0
	25	0	20.66	20.58	20.56	20.57	20.64		0
16QAM	1	0	20.72	20.63	20.59	20.57	20.59	0-1	0
	1	12	20.74	20.73	20.64	20.59	20.63		0
	1	24	20.76	20.74	20.62	20.64	20.67		0
	12	0	20.68	20.62	20.54	20.57	20.62	0-2	0
	12	6	20.70	20.63	20.56	20.56	20.64		0
	12	13	20.66	20.62	20.57	20.60	20.64		0
	25	0	20.66	20.58	20.50	20.49	20.62		0
64QAM	1	0	20.50	20.29	20.35	20.35	20.44	0-2	0
	1	12	20.47	20.32	20.34	20.34	20.43		0
	1	24	20.51	20.37	20.36	20.38	20.42		0
	12	0	20.65	20.63	20.62	20.60	20.71	0-3	0
	12	6	20.65	20.63	20.64	20.60	20.71		0
	12	13	20.63	20.62	20.71	20.64	20.70		0
	25	0	20.65	20.55	20.57	20.55	20.62		0

9.4 WLAN Conducted Powers

Table 9-49
2.4 GHz WLAN Maximum Average RF Power – Ant 1

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax(SU)
		Average	Average	Average	Average
2412	1	**19.97**	17.91	17.70	13.18
2437	6	19.92	17.91	17.85	16.67
2452	9	N/A	17.47	17.96	16.63
2462	11	19.72	15.10	15.48	14.48

Table 9-50
2.4 GHz WLAN Maximum Average RF Power – Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax(SU)
		Average	Average	Average	Average
2412	1	**19.98**	17.97	17.95	16.54
2437	6	19.95	17.66	17.89	16.60
2452	9	N/A	17.38	17.85	16.98
2462	11	19.75	15.10	15.45	16.91

Table 9-51
2.4 GHz WLAN Maximum Average RF Power – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	17.70	17.95	20.84
2437	6	17.85	17.89	20.88
2452	9	**17.96**	**17.85**	20.92
2462	11	15.48	15.45	18.48

Table 9-52
5 GHz WLAN Maximum Average RF Power – Ant 1

5GHz (20MHz) Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11a	802.11n	802.11ac	802.11ax(SU)
		Average	Average	Average	Average
5180	36	17.98	17.94	17.96	15.68
5200	40	17.99	17.98	17.69	15.76
5220	44	17.58	17.99	17.64	15.72
5240	48	17.68	17.68	17.67	15.75
5260	52	17.75	17.76	17.71	15.61
5280	56	17.80	17.90	17.79	15.73
5300	60	17.87	17.89	17.91	15.70
5320	64	**17.91**	17.77	17.76	15.72
5500	100	**17.94**	17.94	17.98	15.64
5600	120	17.74	17.66	17.75	15.82
5620	124	17.68	17.72	17.81	15.79
5720	144	17.83	17.82	17.82	15.72
5745	149	17.94	17.89	17.96	15.97
5785	157	**17.97**	17.91	17.99	15.99
5825	165	17.95	17.93	17.56	15.79

Table 9-53
5 GHz WLAN Maximum Average RF Power – Ant 2

5GHz (20MHz) Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11a	802.11n	802.11ac	802.11ax(SU)
		Average	Average	Average	Average
5180	36	17.79	17.76	17.73	15.62
5200	40	17.85	17.88	17.94	15.67
5220	44	17.92	17.95	17.97	15.77
5240	48	17.98	17.98	17.99	15.96
5260	52	17.87	17.91	17.89	15.74
5280	56	**17.99**	17.99	17.98	15.83
5300	60	17.68	17.69	17.66	15.98
5320	64	17.65	17.62	17.97	15.94
5500	100	17.84	17.86	17.82	15.71
5600	120	17.68	17.74	17.73	15.89
5620	124	17.76	17.71	17.69	15.92
5720	144	**17.98**	17.96	17.98	15.84
5745	149	17.73	17.66	17.81	15.97
5785	157	**17.86**	17.84	17.78	15.64
5825	165	17.76	17.77	17.76	15.98

Table 9-54
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz (20MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5180	36	17.94	17.76	20.86
5200	40	17.98	17.88	20.94
5220	44	17.99	17.95	20.98
5240	48	17.68	17.98	20.84
5260	52	17.76	17.91	20.85
5280	56	**17.90**	**17.99**	20.96
5300	60	17.89	17.69	20.80
5320	64	17.77	17.62	20.71
5500	100	**17.94**	**17.86**	20.91
5600	120	17.66	17.74	20.71
5620	124	17.72	17.71	20.73
5720	144	17.82	17.96	20.90
5745	149	17.89	17.66	20.79
5785	157	**17.91**	**17.84**	20.89
5825	165	17.93	17.77	20.86

Table 9-55
Maximum Output Powers During Conditions with 2.4 GHz and 5 GHz WLAN

2.4GHz 802.11n Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
2412	1	16.43	16.55
2437	6	16.60	16.75
2457	10	**16.76**	**16.62**
2462	11	15.48	15.45
5GHz (40MHz) 802.11n Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
5190	38	13.63	13.65
5230	46	13.68	13.74
5270	54	13.76	13.92
5310	62	**13.87**	**13.94**
5GHz (80MHz) 802.11ac Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
5530	106	**12.86**	**12.80**
5610	122	12.78	12.86
5690	138	12.82	12.36
5775	155	**12.58**	**12.85**

Table 9-56
2.4 GHz WLAN Reduced Average RF Power – Ant 1

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax(SU)
		Average	Average	Average	Average
2412	1	16.79	16.22	16.43	13.18
2437	6	16.68	16.46	16.60	16.72
2462	11	**16.85**	15.10	15.48	14.48

Table 9-57
2.4 GHz WLAN Reduced Average RF Power – Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax(SU)
		Average	Average	Average	Average
2412	1	16.68	16.61	16.55	16.81
2437	6	16.55	16.84	16.75	16.93
2462	11	**16.82**	15.10	15.45	16.75

Table 9-58
5 GHz WLAN Reduced Average RF Power – Ant 1

5GHz (40MHz) Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11n	802.11ac	802.11ax(SU)
		Average	Average	Average
5190	38	13.63	13.63	13.97
5230	46	13.68	13.65	13.60
5270	54	13.76	13.64	13.75
5310	62	**13.87**	13.84	13.71

5GHz (80MHz) Conducted Power [dBm]		
Freq [MHz]	Channel	IEEE Transmission Mode
		802.11ac
		Average
5530	106	**12.86**
5610	122	12.78
5690	138	12.82
5775	155	**12.58**

Table 9-59
5 GHz WLAN Reduced Average RF Power – Ant 2

5GHz (40MHz) Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11n	802.11ac	802.11ax(SU)
		Average	Average	Average
5190	38	13.65	13.60	13.95
5230	46	13.74	13.76	13.64
5270	54	13.92	13.55	13.76
5310	62	**13.94**	13.95	13.61

5GHz (80MHz) Conducted Power [dBm]		
Freq [MHz]	Channel	IEEE Transmission Mode
		802.11ac
		Average
5530	106	12.80
5610	122	**12.86**
5690	138	12.36
5775	155	**12.85**

Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02:

- Power measurements were performed for the transmission mode configuration with the highest maximum output power specified for production units.
- For transmission modes with the same maximum output power specification, powers were measured for the largest channel bandwidth, lowest order modulation and lowest data rate.
- For transmission modes with identical maximum specified output power, channel bandwidth, modulation and data rates, power measurements were required for all identical configurations.
- For each transmission mode configuration, powers were measured for the highest and lowest channels; and at the mid-band channel(s) when there were at least 3 channels supported. For configurations with multiple mid-band channels, due to an even number of channels, both channels were measured.
- The bolded data rate and channel above were tested for SAR.

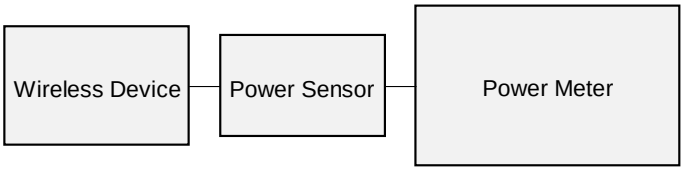


Figure 9-3
Power Measurement Setup

9.5 Bluetooth Conducted Powers

Table 9-60
Bluetooth Average RF Power

Frequency [MHz]	Data Rate [Mbps]	Mod.	Channel No.	Avg Conducted Power	
				[dBm]	[mW]
2402	1.0	GFSK	0	**16.18**	41.479
2441	1.0	GFSK	39	16.13	40.997
2480	1.0	GFSK	78	14.88	30.781
2402	2.0	π/4-DQPSK	0	9.42	8.742
2441	2.0	π/4-DQPSK	39	9.30	8.509
2480	2.0	π/4-DQPSK	78	8.43	6.964
2402	3.0	8DPSK	0	9.49	8.883
2441	3.0	8DPSK	39	9.39	8.688
2480	3.0	8DPSK	78	8.53	7.136

Note: The bolded data rates and channel above were tested for SAR.

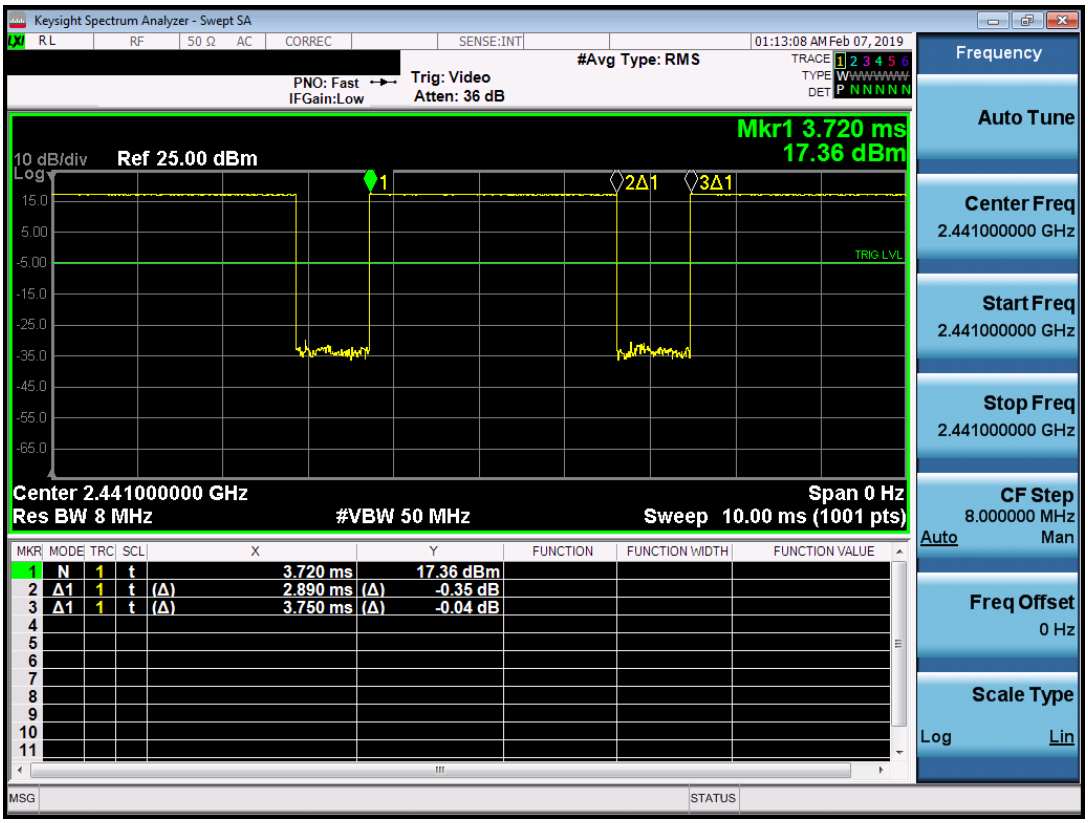


Figure 9-4
Bluetooth Transmission Plot

Equation 9-1
Bluetooth Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.89ms}{3.75ms} * 100\% = 77.10\%$$

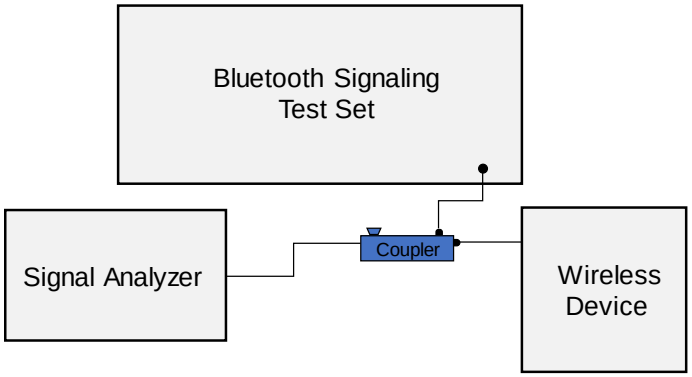


Figure 9-5
Power Measurement Setup

10 SYSTEM VERIFICATION

10.1 Tissue Verification

Table 10-1
Measured Tissue Properties - Head

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
5/9/2019	750H	22.3	700	0.901	43.029	0.889	42.201	1.35%	1.96%
			710	0.904	42.997	0.890	42.149	1.57%	2.01%
			740	0.915	42.922	0.893	41.994	2.46%	2.21%
			755	0.920	42.881	0.894	41.916	2.91%	2.30%
			770	0.925	42.834	0.895	41.838	3.35%	2.38%
			785	0.930	42.781	0.896	41.760	3.79%	2.44%
5/8/2019	835H	22.5	820	0.931	39.694	0.899	41.578	3.56%	-4.53%
			835	0.936	39.660	0.900	41.500	4.00%	-4.43%
			850	0.942	39.633	0.916	41.500	2.84%	-4.50%
6/6/2019	835H	21.8	820	0.928	43.182	0.899	41.578	3.23%	3.86%
			835	0.934	43.147	0.900	41.500	3.78%	3.97%
			850	0.940	43.105	0.916	41.500	2.62%	3.87%
5/6/2019	1750H	22.4	1710	1.367	41.745	1.348	40.142	1.41%	3.99%
			1750	1.392	41.682	1.371	40.079	1.53%	4.00%
			1790	1.417	41.611	1.394	40.016	1.65%	3.99%
5/8/2019	1900H	22.8	1850	1.381	39.570	1.400	40.000	-1.36%	-1.08%
			1880	1.411	39.433	1.400	40.000	0.79%	-1.42%
			1910	1.443	39.301	1.400	40.000	3.07%	-1.75%
5/12/2019	1900H	21.1	1850	1.405	38.795	1.400	40.000	0.36%	-3.01%
			1880	1.437	38.657	1.400	40.000	2.64%	-3.36%
			1910	1.468	38.521	1.400	40.000	4.86%	-3.70%
5/8/2019	2450H-2600H	22.3	2400	1.762	37.971	1.756	39.289	0.34%	-3.35%
			2450	1.797	37.892	1.800	39.200	-0.17%	-3.34%
			2500	1.833	37.843	1.855	39.136	-1.19%	-3.30%
			2550	1.871	37.757	1.909	39.073	-1.99%	-3.37%
			2600	1.912	37.696	1.964	39.009	-2.65%	-3.37%
			2650	1.947	37.627	2.018	38.945	-3.52%	-3.38%
			2700	1.991	37.525	2.073	38.882	-3.96%	-3.49%
05/13/2019	5200H-5800H	21.7	5180	4.692	36.636	4.635	36.009	1.23%	1.74%
			5200	4.716	36.599	4.655	35.986	1.31%	1.70%
			5220	4.736	36.559	4.676	35.963	1.28%	1.66%
			5240	4.762	36.521	4.696	35.940	1.41%	1.62%
			5260	4.783	36.481	4.717	35.917	1.40%	1.57%
			5280	4.809	36.437	4.737	35.894	1.52%	1.51%
			5300	4.833	36.404	4.758	35.871	1.58%	1.49%
			5320	4.859	36.370	4.778	35.849	1.70%	1.45%
			5500	5.065	36.026	4.963	35.643	2.06%	1.07%
			5520	5.091	35.990	4.983	35.620	2.17%	1.04%
			5540	5.119	35.950	5.004	35.597	2.30%	0.99%
			5560	5.143	35.920	5.024	35.574	2.37%	0.97%
			5580	5.165	35.878	5.045	35.551	2.38%	0.92%
			5600	5.186	35.834	5.065	35.529	2.39%	0.86%
			5620	5.217	35.789	5.086	35.506	2.58%	0.80%
			5640	5.242	35.748	5.106	35.483	2.66%	0.75%
			5660	5.269	35.717	5.127	35.460	2.77%	0.72%
			5680	5.291	35.684	5.147	35.437	2.80%	0.70%
			5700	5.314	35.655	5.168	35.414	2.83%	0.68%
			5745	5.370	35.550	5.214	35.363	2.99%	0.53%
			5765	5.396	35.511	5.234	35.340	3.10%	0.48%
			5785	5.422	35.482	5.255	35.317	3.18%	0.47%
			5800	5.440	35.459	5.270	35.300	3.23%	0.45%
			5805	5.445	35.450	5.275	35.294	3.22%	0.44%
			5825	5.466	35.409	5.296	35.271	3.21%	0.39%

Table 10-2
Measured Tissue Properties - Body

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
5/14/2019	750B	22.7	700	0.927	54.340	0.959	55.726	-3.34%	-2.49%
			710	0.935	54.247	0.960	55.687	-2.60%	-2.59%
			740	0.962	53.976	0.963	55.570	-0.10%	-2.87%
			755	0.975	53.841	0.964	55.512	1.14%	-3.01%
			770	0.988	53.700	0.965	55.453	2.38%	-3.16%
			785	1.002	53.556	0.966	55.395	3.73%	-3.32%
5/8/2019	835B	20.0	820	0.977	54.307	0.969	55.258	0.83%	-1.72%
			835	0.983	54.284	0.970	55.200	1.34%	-1.66%
			850	0.989	54.269	0.988	55.154	0.10%	-1.60%
6/3/2019	835B	20.0	820	0.980	53.012	0.969	55.258	1.14%	-4.06%
			835	0.987	52.997	0.970	55.200	1.75%	-3.99%
			850	0.993	52.976	0.988	55.154	0.51%	-3.95%
6/10/2019	835B	20.0	820	0.977	54.093	0.969	55.258	0.83%	-2.11%
			835	0.983	54.072	0.970	55.200	1.34%	-2.04%
			850	0.990	54.043	0.988	55.154	0.20%	-2.01%
6/5/2019	835B	20.2	820	0.997	53.031	0.969	55.258	2.89%	-4.03%
			835	1.004	53.015	0.970	55.200	3.51%	-3.96%
			850	1.010	52.993	0.988	55.154	2.23%	-3.92%
5/1/2019	1750B	21.9	1710	1.453	52.642	1.463	53.537	-0.68%	-1.67%
			1750	1.497	52.486	1.488	53.432	0.60%	-1.77%
			1790	1.540	52.312	1.514	53.326	1.72%	-1.90%
5/6/2019	1750B	21.7	1710	1.450	52.334	1.463	53.537	-0.89%	-2.25%
			1750	1.495	52.197	1.488	53.432	0.47%	-2.31%
			1790	1.539	52.024	1.514	53.326	1.65%	-2.44%
5/1/2019	1900B	22.5	1850	1.526	52.535	1.520	53.300	0.39%	-1.44%
			1880	1.557	52.423	1.520	53.300	2.43%	-1.65%
			1910	1.590	52.330	1.520	53.300	4.61%	-1.82%
5/6/2019	1900B	23.5	1850	1.466	52.345	1.520	53.300	-3.55%	-1.79%
			1880	1.498	52.248	1.520	53.300	-1.45%	-1.97%
			1910	1.532	52.150	1.520	53.300	0.79%	-2.16%
5/8/2019	1900B	23.4	1850	1.485	52.047	1.520	53.300	-2.30%	-2.35%
			1880	1.518	51.958	1.520	53.300	-0.13%	-2.52%
			1910	1.552	51.869	1.520	53.300	2.11%	-2.68%
5/27/2019	1900B	23.0	1850	1.513	53.196	1.520	53.300	-0.46%	-0.20%
			1880	1.547	53.107	1.520	53.300	1.78%	-0.36%
			1910	1.582	53.021	1.520	53.300	4.08%	-0.52%
5/8/2019	2450B-2600B	21.1	2400	1.988	52.395	1.902	52.767	4.52%	-0.70%
			2450	2.034	52.307	1.950	52.700	4.31%	-0.75%
			2500	2.079	52.249	2.021	52.636	2.87%	-0.74%
			2550	2.126	52.157	2.092	52.573	1.63%	-0.79%
			2600	2.176	52.092	2.163	52.509	0.60%	-0.79%
			2650	2.223	52.016	2.234	52.445	-0.49%	-0.82%
			2700	2.276	51.919	2.305	52.382	-1.26%	-0.88%
5/8/2019	2450B-2600B	22.6	2400	1.985	51.706	1.902	52.767	4.36%	-2.01%
			2450	2.046	51.565	1.950	52.700	4.92%	-2.15%
			2500	2.107	51.421	2.021	52.636	4.26%	-2.31%
			2550	2.170	51.264	2.092	52.573	3.73%	-2.49%
			2600	2.232	51.100	2.163	52.509	3.19%	-2.68%
			2650	2.294	50.933	2.234	52.445	2.69%	-2.88%
			2700	2.356	50.769	2.305	52.382	2.21%	-3.08%
5/16/2019	2450B	22.8	2400	1.976	52.212	1.902	52.767	3.89%	-1.05%
			2450	2.033	52.080	1.950	52.700	4.26%	-1.18%
			2500	2.091	51.939	2.021	52.636	3.46%	-1.32%
5/20/2019	2450B	23.7	2400	1.968	52.622	1.902	52.767	3.47%	-0.27%
			2450	2.028	52.499	1.950	52.700	4.00%	-0.38%
			2500	2.086	52.358	2.021	52.636	3.22%	-0.53%

Table 10-3
Measured Tissue Properties - Body

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
5/26/2019	2450B-2600B	23.9	2400	1.984	51.674	1.902	52.767	4.31%	-2.07%
			2450	2.043	51.521	1.950	52.700	4.77%	-2.24%
			2500	2.103	51.362	2.021	52.636	4.06%	-2.42%
			2550	2.163	51.208	2.092	52.573	3.39%	-2.60%
			2600	2.223	51.046	2.163	52.509	2.77%	-2.79%
			2650	2.283	50.891	2.234	52.445	2.19%	-2.96%
			2700	2.345	50.728	2.305	52.382	1.74%	-3.16%
5/6/2019	2600B	22.2	2500	2.074	52.353	2.021	52.636	2.62%	-0.54%
			2550	2.121	52.255	2.092	52.573	1.39%	-0.60%
			2600	2.171	52.185	2.163	52.509	0.37%	-0.62%
			2650	2.217	52.106	2.234	52.445	-0.76%	-0.65%
			2700	2.268	52.018	2.305	52.382	-1.61%	-0.69%
05/13/2019	5200B-5800B	21.4	5180	5.300	47.927	5.276	49.041	0.45%	-2.27%
			5200	5.332	47.872	5.299	49.014	0.62%	-2.33%
			5220	5.362	47.824	5.323	48.987	0.73%	-2.37%
			5240	5.389	47.786	5.346	48.960	0.80%	-2.40%
			5260	5.418	47.762	5.369	48.933	0.91%	-2.39%
			5280	5.447	47.705	5.393	48.906	1.00%	-2.46%
			5300	5.471	47.680	5.416	48.879	1.02%	-2.45%
			5320	5.502	47.643	5.439	48.851	1.16%	-2.47%
			5500	5.755	47.318	5.650	48.607	1.86%	-2.65%
			5520	5.788	47.283	5.673	48.580	2.03%	-2.67%
			5540	5.821	47.237	5.696	48.553	2.19%	-2.71%
			5560	5.857	47.197	5.720	48.526	2.40%	-2.74%
			5580	5.889	47.173	5.743	48.499	2.54%	-2.73%
			5600	5.911	47.133	5.766	48.471	2.51%	-2.76%
			5620	5.935	47.068	5.790	48.444	2.50%	-2.84%
			5640	5.966	47.037	5.813	48.417	2.63%	-2.85%
			5660	6.005	47.008	5.837	48.390	2.88%	-2.86%
			5680	6.033	46.976	5.860	48.363	2.95%	-2.87%
			5700	6.065	46.947	5.883	48.336	3.09%	-2.87%
			5745	6.131	46.845	5.936	48.275	3.29%	-2.96%
			5765	6.161	46.811	5.959	48.248	3.39%	-2.98%
			5785	6.192	46.762	5.982	48.220	3.51%	-3.02%
			5800	6.219	46.755	6.000	48.200	3.65%	-3.00%
			5805	6.226	46.755	6.006	48.193	3.66%	-2.98%
			5825	6.248	46.720	6.029	48.166	3.63%	-3.00%
05/28/2019	5200B-5800B	22.2	5180	5.273	49.450	5.276	49.041	-0.06%	0.83%
			5200	5.310	49.406	5.299	49.014	0.21%	0.80%
			5220	5.334	49.361	5.323	48.987	0.21%	0.76%
			5240	5.365	49.313	5.346	48.960	0.36%	0.72%
			5260	5.387	49.266	5.369	48.933	0.34%	0.68%
			5280	5.412	49.257	5.393	48.906	0.35%	0.72%
			5300	5.442	49.226	5.416	48.879	0.48%	0.71%
			5320	5.472	49.189	5.439	48.851	0.61%	0.69%
			5500	5.725	48.869	5.650	48.607	1.33%	0.54%
			5520	5.757	48.840	5.673	48.580	1.48%	0.54%
			5540	5.790	48.766	5.696	48.553	1.65%	0.44%
			5560	5.822	48.737	5.720	48.526	1.78%	0.43%
			5580	5.859	48.718	5.743	48.499	2.02%	0.45%
			5600	5.876	48.674	5.766	48.471	1.91%	0.42%
			5620	5.903	48.651	5.790	48.444	1.95%	0.43%
			5640	5.936	48.586	5.813	48.417	2.12%	0.35%
			5660	5.970	48.548	5.837	48.390	2.28%	0.33%
			5680	6.003	48.519	5.860	48.363	2.44%	0.32%
			5700	6.028	48.521	5.883	48.336	2.46%	0.38%
			5745	6.097	48.410	5.936	48.275	2.71%	0.28%
			5765	6.123	48.365	5.959	48.248	2.75%	0.24%
			5785	6.155	48.324	5.982	48.220	2.89%	0.22%
			5800	6.183	48.309	6.000	48.200	3.05%	0.23%
			5805	6.193	48.309	6.006	48.193	3.11%	0.24%
			5825	6.220	48.290	6.029	48.166	3.17%	0.26%

The above measured tissue parameters were used in the DASY software. The DASY software was used to perform interpolation to determine the dielectric parameters at the SAR test device frequencies (per KDB Publication 865664 D01v01r04 and IEEE 1528-2013 6.6.1.2). The tissue parameters listed in the SAR test plots may slightly differ from the table above due to significant digit rounding in the software.

10.2 Test System Verification

Prior to SAR assessment, the system is verified to ±10% of the SAR measurement on the reference dipole at the time of calibration by the calibration facility. Full system validation status and result summary can be found in Appendix E.

Table 10-4
System Verification Results – 1g

System Verification TARGET & MEASURED												
SAR System #	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp (°C)	Liquid Temp (°C)	Input Power (W)	Source SN	Probe SN	Measured SAR_{1g} (W/kg)	1 W Target SAR_{1g} (W/kg)	1 W Normalized SAR_{1g} (W/kg)	$Deviation_{1g}$ (%)
D	750	HEAD	05/09/2019	23.1	22.3	0.200	1161	3914	1.730	8.030	8.650	7.72%
D	835	HEAD	05/08/2019	24.4	22.7	0.200	4d132	3914	2.070	9.590	10.350	7.92%
H	835	HEAD	06/06/2019	21.1	21.8	0.200	4d132	7406	2.040	9.590	10.200	6.36%
H	1750	HEAD	05/06/2019	21.9	22.4	0.100	1008	7409	3.640	36.200	36.400	0.55%
G	1900	HEAD	05/08/2019	23.8	22.8	0.100	5d149	7410	4.060	39.300	40.600	3.31%
G	1900	HEAD	05/12/2019	21.3	21.1	0.100	5d149	7410	4.240	39.300	42.400	7.89%
E	2450	HEAD	05/08/2019	23.3	22.3	0.100	981	3589	5.120	52.300	51.200	-2.10%
E	2600	HEAD	05/08/2019	23.3	22.3	0.100	1064	3589	6.100	57.000	61.000	7.02%
H	5250	HEAD	05/13/2019	20.3	20.9	0.050	1191	7409	3.900	78.900	78.000	-1.14%
H	5600	HEAD	05/13/2019	20.3	20.9	0.050	1191	7409	4.010	83.600	80.200	-4.07%
H	5750	HEAD	05/13/2019	20.3	20.9	0.050	1191	7409	3.850	79.100	77.000	-2.65%
G	750	BODY	05/14/2019	23.5	22.7	0.200	1161	7410	1.770	8.430	8.850	4.98%
J	835	BODY	05/08/2019	21.9	20.0	0.200	4d132	7488	1.950	9.670	9.750	0.83%
J	835	BODY	06/03/2019	18.7	19.8	0.200	4d132	7488	1.930	9.670	9.650	-0.21%
J	835	BODY	06/05/2019	22.7	20.2	0.200	4d132	7488	2.000	9.670	10.000	3.41%
J	835	BODY	06/10/2019	20.5	20.0	0.200	4d132	7488	1.900	9.670	9.500	-1.76%
D	1750	BODY	05/01/2019	22.3	21.9	0.100	1148	3914	3.820	37.000	38.200	3.24%
D	1750	BODY	05/06/2019	22.2	21.7	0.100	1008	3914	3.850	37.400	38.500	2.94%
G	1900	BODY	05/01/2019	23.2	21.7	0.100	5d149	7410	4.210	39.400	42.100	6.85%
I	1900	BODY	05/06/2019	22.0	21.8	0.100	5d080	7357	4.150	39.200	41.500	5.87%
I	1900	BODY	05/08/2019	23.5	21.6	0.100	5d149	7357	4.200	39.400	42.000	6.60%
G	1900	BODY	05/27/2019	21.3	21.7	0.100	5d148	7410	4.120	39.100	41.200	5.37%
L	2450	BODY	05/08/2019	21.6	21.1	0.100	719	7308	5.190	50.100	51.900	3.59%
K	2450	BODY	05/08/2019	23.7	21.9	0.100	797	7417	5.110	51.100	51.100	0.00%
K	2450	BODY	05/16/2019	23.4	22.8	0.100	719	7417	5.140	50.100	51.400	2.59%
K	2450	BODY	05/20/2019	23.0	22.7	0.100	719	7417	5.040	50.100	50.400	0.60%
L	2600	BODY	05/06/2019	21.9	20.7	0.100	1004	7308	5.670	54.800	56.700	3.47%
L	2600	BODY	05/08/2019	21.6	21.1	0.100	1004	7308	5.380	54.800	53.800	-1.82%
L	5250	BODY	05/13/2019	19.4	20.1	0.050	1057	7308	3.600	75.900	72.000	-5.14%
L	5600	BODY	05/13/2019	19.4	20.1	0.050	1057	7308	3.850	79.900	77.000	-3.63%
L	5750	BODY	05/13/2019	19.4	20.1	0.050	1057	7308	3.550	76.700	71.000	-7.43%

Table 10-5
System Verification Results – 10g

System Verification TARGET & MEASURED												
SAR System #	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp (°C)	Liquid Temp (°C)	Input Power (W)	Source SN	Probe SN	Measured SAR_{10g} (W/kg)	1 W Target SAR_{10g} (W/kg)	1 W Normalized SAR_{10g} (W/kg)	Deviation$_{10g}$ (%)
G	750	BODY	05/14/2019	23.5	22.7	0.200	1161	7410	1.170	5.550	5.850	5.41%
J	835	BODY	05/08/2019	21.9	20.0	0.200	4d132	7488	1.280	6.350	6.400	0.79%
J	835	BODY	06/05/2019	22.7	20.2	0.200	4d132	7488	1.310	6.350	6.550	3.15%
J	835	BODY	06/10/2019	20.5	20.0	0.200	4d132	7488	1.250	6.350	6.250	-1.57%
D	1750	BODY	05/01/2019	22.3	21.9	0.100	1148	3914	2.010	19.800	20.100	1.52%
D	1750	BODY	05/06/2019	22.2	21.7	0.100	1008	3914	2.030	19.900	20.300	2.01%
I	1900	BODY	05/06/2019	22.0	21.8	0.100	5d080	7357	2.110	20.600	21.100	2.43%
I	1900	BODY	05/08/2019	23.5	21.6	0.100	5d149	7357	2.150	20.700	21.500	3.86%
G	1900	BODY	05/27/2019	21.3	21.7	0.100	5d148	7410	2.130	20.500	21.300	3.90%
L	2450	BODY	05/08/2019	21.6	21.1	0.100	719	7308	2.370	23.700	23.700	0.00%
K	2450	BODY	05/08/2019	23.7	21.9	0.100	797	7417	2.330	24.200	23.300	-3.72%
K	2450	BODY	05/16/2019	23.4	22.8	0.100	719	7417	2.360	23.700	23.600	-0.42%
K	2450	BODY	05/26/2019	22.8	23.1	0.100	719	7417	2.370	23.700	23.700	0.00%
L	2600	BODY	05/08/2019	21.6	21.1	0.100	1004	7308	2.390	24.700	23.900	-3.24%
K	2600	BODY	05/26/2019	22.8	23.1	0.100	1004	7417	2.360	24.700	23.600	-4.45%
L	5250	BODY	05/13/2019	19.4	20.1	0.050	1057	7308	0.995	21.100	19.900	-5.69%
L	5600	BODY	05/13/2019	19.4	20.1	0.050	1057	7308	1.050	22.300	21.000	-5.83%
L	5750	BODY	05/13/2019	19.4	20.1	0.050	1057	7308	0.984	21.200	19.680	-7.17%
L	5250	BODY	05/28/2019	20.9	20.7	0.050	1057	7308	0.974	21.100	19.480	-7.68%
L	5600	BODY	05/28/2019	20.9	20.7	0.050	1057	7308	1.100	22.300	22.000	-1.35%
L	5750	BODY	05/28/2019	20.9	20.7	0.050	1057	7308	0.981	21.200	19.620	-7.45%

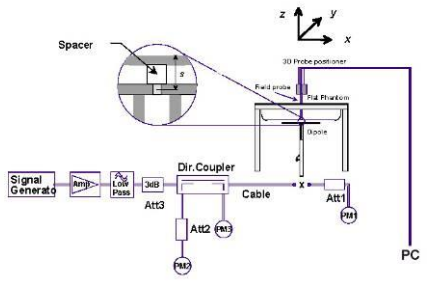


Figure 10-1
System Verification Setup Diagram

Figure 10-2
System Verification Setup Photo

11 SAR DATA SUMMARY

11.1 Standalone Head SAR Data

Table 11-1
GSM 850 Head SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.										(W/kg)		(W/kg)	
836.60	190	GSM 850	GSM	33.0	32.14	0.01	Right	Cheek	1875M	1:8.3	0.141	1.219	0.172	A1
836.60	190	GSM 850	GSM	33.0	32.14	-0.12	Right	Tilt	1875M	1:8.3	0.066	1.219	0.080	
836.60	190	GSM 850	GSM	33.0	32.14	0.04	Left	Cheek	1875M	1:8.3	0.110	1.219	0.134	
836.60	190	GSM 850	GSM	33.0	32.14	0.10	Left	Tilt	1875M	1:8.3	0.060	1.219	0.073	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-2
GSM 1900 Head SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.										(W/kg)		(W/kg)	
1880.00	661	GSM 1900	GSM	30.0	29.55	0.13	Right	Cheek	1876M	1:8.3	0.038	1.109	0.042	
1880.00	661	GSM 1900	GSM	30.0	29.55	0.20	Right	Tilt	1876M	1:8.3	0.043	1.109	0.048	
1880.00	661	GSM 1900	GSM	30.0	29.55	-0.18	Left	Cheek	1876M	1:8.3	0.051	1.109	0.057	A2
1880.00	661	GSM 1900	GSM	30.0	29.55	0.16	Left	Tilt	1876M	1:8.3	0.043	1.109	0.048	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-3
UMTS 850 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
836.60	4183	UMTS 850	RMC	25.0	24.74	1	0.00	Right	Cheek	1940M	1:1	0.353	1.062	**0.375**	A3
836.60	4183	UMTS 850	RMC	25.0	24.74	1	0.03	Right	Tilt	1940M	1:1	0.168	1.062	0.178	
836.60	4183	UMTS 850	RMC	25.0	24.74	1	0.02	Left	Cheek	1940M	1:1	0.273	1.062	0.290	
836.60	4183	UMTS 850	RMC	25.0	24.74	1	-0.03	Left	Tilt	1940M	1:1	0.155	1.062	0.165	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**								**Head** **1.6 W/kg (mW/g)** averaged over 1 gram							

Table 11-4
UMTS 1750 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.										(W/kg)		(W/kg)		
1732.40	1412	UMTS 1750	RMC	24.0	23.82	0.03	Right	Cheek	1954M	1:1	0.152	1.042	0.158		
1732.40	1412	UMTS 1750	RMC	24.0	23.82	-0.08	Right	Tilt	1954M	1:1	0.118	1.042	0.123		
1732.40	1412	UMTS 1750	RMC	24.0	23.82	0.17	Left	Cheek	1954M	1:1	0.156	1.042	0.163	A4	
1732.40	1412	UMTS 1750	RMC	24.0	23.82	0.06	Left	Tilt	1954M	1:1	0.077	1.042	0.080		
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**								**Head** **1.6 W/kg (mW/g)** averaged over 1 gram							

Table 11-5
UMTS 1900 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.										(W/kg)		(W/kg)		
1880.00	9400	UMTS 1900	RMC	24.0	23.82	0.02	Right	Cheek	1876M	1:1	0.086	1.042	0.090		
1880.00	9400	UMTS 1900	RMC	24.0	23.82	0.09	Right	Tilt	1876M	1:1	0.110	1.042	0.115		
1880.00	9400	UMTS 1900	RMC	24.0	23.82	-0.12	Left	Cheek	1876M	1:1	0.126	1.042	0.131	A5	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	-0.15	Left	Tilt	1876M	1:1	0.082	1.042	0.085		
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**								**Head** **1.6 W/kg (mW/g)** averaged over 1 gram							

Table 11-6
LTE Band 12 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	26	0.00	0	Right	Cheek	QPSK	1	25	1876M	1:1	0.156	1.242	0.194	A6
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	26	0.02	1	Right	Cheek	QPSK	25	0	1876M	1:1	0.124	1.230	0.153	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	26	-0.08	0	Right	Tilt	QPSK	1	25	1876M	1:1	0.076	1.242	0.094	
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	26	0.06	1	Right	Tilt	QPSK	25	0	1876M	1:1	0.059	1.230	0.073	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	26	0.14	0	Left	Cheek	QPSK	1	25	1876M	1:1	0.123	1.242	0.153	
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	26	0.07	1	Left	Cheek	QPSK	25	0	1876M	1:1	0.096	1.230	0.118	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	26	0.05	0	Left	Tilt	QPSK	1	25	1876M	1:1	0.077	1.242	0.096	
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	26	0.06	1	Left	Tilt	QPSK	25	0	1876M	1:1	0.058	1.230	0.071	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-7
LTE Band 13 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	27	0.05	0	Right	Cheek	QPSK	1	0	1876M	1:1	0.186	1.247	0.232	A7
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	27	0.05	1	Right	Cheek	QPSK	25	12	1876M	1:1	0.162	1.239	0.201	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	27	-0.02	0	Right	Tilt	QPSK	1	0	1876M	1:1	0.093	1.247	0.116	
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	27	0.02	1	Right	Tilt	QPSK	25	12	1876M	1:1	0.082	1.239	0.102	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	27	-0.05	0	Left	Cheek	QPSK	1	0	1876M	1:1	0.169	1.247	0.211	
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	27	0.03	1	Left	Cheek	QPSK	25	12	1876M	1:1	0.147	1.239	0.182	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	27	-0.01	0	Left	Tilt	QPSK	1	0	1876M	1:1	0.074	1.247	0.092	
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	27	0.03	1	Left	Tilt	QPSK	25	12	1876M	1:1	0.064	1.239	0.079	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-8
LTE Band 26 (Cell) Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	17	0.00	0	Right	Cheek	QPSK	1	0	1940M	1:1	0.288	1.125	0.324	A8
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	17	0.01	1	Right	Cheek	QPSK	36	18	1940M	1:1	0.252	1.094	0.276	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	17	-0.02	0	Right	Tilt	QPSK	1	0	1940M	1:1	0.114	1.125	0.128	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	17	-0.01	1	Right	Tilt	QPSK	36	18	1940M	1:1	0.100	1.094	0.109	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	17	0.03	0	Left	Cheek	QPSK	1	0	1940M	1:1	0.211	1.125	0.237	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	17	0.02	1	Left	Cheek	QPSK	36	18	1940M	1:1	0.191	1.094	0.209	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	17	0.05	0	Left	Tilt	QPSK	1	0	1940M	1:1	0.116	1.125	0.131	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	17	0.01	1	Left	Tilt	QPSK	36	18	1940M	1:1	0.101	1.094	0.110	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram					

Table 11-9
LTE Band 66 (AWS) Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	-0.02	0	Right	Cheek	QPSK	1	0	1954M	1:1	0.143	1.074	0.154	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	0.01	1	Right	Cheek	QPSK	50	25	1954M	1:1	0.112	1.030	0.115	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	0.19	0	Right	Tilt	QPSK	1	0	1954M	1:1	0.110	1.074	0.118	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	0.06	1	Right	Tilt	QPSK	50	25	1954M	1:1	0.097	1.030	0.100	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	-0.02	0	Left	Cheek	QPSK	1	0	1954M	1:1	0.154	1.074	0.165	A9
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	0.04	1	Left	Cheek	QPSK	50	25	1954M	1:1	0.129	1.030	0.133	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	-0.01	0	Left	Tilt	QPSK	1	0	1954M	1:1	0.105	1.074	0.113	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	0.02	1	Left	Tilt	QPSK	50	25	1954M	1:1	0.083	1.030	0.085	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram					

Table 11-10
LTE Band 25 (PCS) Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	0.15	0	Right	Cheek	QPSK	1	99	1876M	1:1	0.088	1.069	0.094	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	0.17	1	Right	Cheek	QPSK	50	50	1876M	1:1	0.076	1.057	0.080	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	-0.13	0	Right	Tilt	QPSK	1	99	1876M	1:1	0.097	1.069	0.104	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	-0.02	1	Right	Tilt	QPSK	50	50	1876M	1:1	0.077	1.057	0.081	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	0.20	0	Left	Cheek	QPSK	1	99	1876M	1:1	0.142	1.069	0.152	A10
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	0.17	1	Left	Cheek	QPSK	50	50	1876M	1:1	0.113	1.057	0.119	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	0.02	0	Left	Tilt	QPSK	1	99	1876M	1:1	0.130	1.069	0.139	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	-0.08	1	Left	Tilt	QPSK	50	50	1876M	1:1	0.096	1.057	0.101	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram					

Table 11-11
LTE Band 41 Head SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	-0.17	0	Right	Cheek	QPSK	1	0	1940M	1:1.58	0.063	1.148	0.072	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	0.11	1	Right	Cheek	QPSK	50	0	1940M	1:1.58	0.045	1.112	0.050	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	0.21	0	Right	Tilt	QPSK	1	0	1940M	1:1.58	0.030	1.148	0.034	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	-0.04	1	Right	Tilt	QPSK	50	0	1940M	1:1.58	0.024	1.112	0.027	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	0.07	0	Left	Cheek	QPSK	1	0	1940M	1:1.58	0.087	1.148	0.100	A11
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	-0.08	1	Left	Cheek	QPSK	50	0	1940M	1:1.58	0.068	1.112	0.076	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	0.12	0	Left	Tilt	QPSK	1	0	1940M	1:1.58	0.029	1.148	0.033	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	0.12	1	Left	Tilt	QPSK	50	0	1940M	1:1.58	0.021	1.112	0.023	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-12
DTS Head SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2462	11	802.11b	DSSS	22	17.0	16.85	-0.21	Right	Cheek	1	1921M	1	99.9	0.092	-	1.035	1.001	-	
2462	11	802.11b	DSSS	22	17.0	16.85	0.17	Right	Tilt	1	1921M	1	99.9	0.174	0.098	1.035	1.001	**0.102**	A12
2462	11	802.11b	DSSS	22	17.0	16.85	0.12	Left	Cheek	1	1921M	1	99.9	0.059	-	1.035	1.001	-	
2462	11	802.11b	DSSS	22	17.0	16.85	0.17	Left	Tilt	1	1921M	1	99.9	0.120	-	1.035	1.001	-	
2462	11	802.11b	DSSS	22	17.0	16.82	0.11	Right	Cheek	2	1921M	1	99.9	0.072	-	1.042	1.001	-	
2462	11	802.11b	DSSS	22	17.0	16.82	0.14	Right	Tilt	2	1921M	1	99.9	0.081	-	1.042	1.001	-	
2462	11	802.11b	DSSS	22	17.0	16.82	0.18	Left	Cheek	2	1921M	1	99.9	0.046	-	1.042	1.001	-	
2462	11	802.11b	DSSS	22	17.0	16.82	0.13	Left	Tilt	2	1921M	1	99.9	0.082	0.051	1.042	1.001	0.053	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-13
NII Head SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
5310	62	802.11n	OFDM	40	14.0	13.87	0.04	Right	Cheek	1	1921M	13.5	97.2	0.236	0.112	1.030	1.029	**0.119**	A13
5310	62	802.11n	OFDM	40	14.0	13.87	0.17	Right	Tilt	1	1921M	13.5	97.2	0.153	-	1.030	1.029	-	
5310	62	802.11n	OFDM	40	14.0	13.87	0.16	Left	Cheek	1	1921M	13.5	97.2	0.154	-	1.030	1.029	-	
5310	62	802.11n	OFDM	40	14.0	13.87	0.19	Left	Tilt	1	1921M	13.5	97.2	0.112	-	1.030	1.029	-	
5310	62	802.11n	OFDM	40	14.0	13.94	0.00	Right	Cheek	2	1921M	13.5	97.2	0.096	0.021	1.014	1.029	0.022	
5310	62	802.11n	OFDM	40	14.0	13.94	0.11	Right	Tilt	2	1921M	13.5	97.2	0.082	-	1.014	1.029	-	
5310	62	802.11n	OFDM	40	14.0	13.94	0.00	Left	Cheek	2	1921M	13.5	97.2	0.060	-	1.014	1.029	-	
5310	62	802.11n	OFDM	40	14.0	13.94	0.00	Left	Tilt	2	1921M	13.5	97.2	0.074	-	1.014	1.029	-	
5530	106	802.11ac	OFDM	80	14.0	12.86	-0.14	Right	Cheek	1	1921M	29.3	94.5	0.024	-	1.300	1.058	-	
5530	106	802.11ac	OFDM	80	14.0	12.86	0.12	Right	Tilt	1	1921M	29.3	94.5	0.031	0.008	1.300	1.058	0.011	
5530	106	802.11ac	OFDM	80	14.0	12.86	0.12	Left	Cheek	1	1921M	29.3	94.5	0.019	-	1.300	1.058	-	
5530	106	802.11ac	OFDM	80	14.0	12.86	-0.13	Left	Tilt	1	1921M	29.3	94.5	0.019	-	1.300	1.058	-	
5610	122	802.11ac	OFDM	80	14.0	12.86	0.11	Right	Cheek	2	1921M	29.3	96.2	0.082	-	1.300	1.040	-	
5610	122	802.11ac	OFDM	80	14.0	12.86	0.19	Right	Tilt	2	1921M	29.3	96.2	0.119	0.048	1.300	1.040	0.065	
5610	122	802.11ac	OFDM	80	14.0	12.86	0.00	Left	Cheek	2	1921M	29.3	96.2	0.090	-	1.300	1.040	-	
5610	122	802.11ac	OFDM	80	14.0	12.86	0.16	Left	Tilt	2	1921M	29.3	96.2	0.116	-	1.300	1.040	-	
5775	155	802.11ac	OFDM	80	14.0	12.58	0.00	Right	Cheek	1	1921M	29.3	94.5	0.082	-	1.387	1.058	-	
5775	155	802.11ac	OFDM	80	14.0	12.58	0.20	Right	Tilt	1	1921M	29.3	94.5	0.093	0.030	1.387	1.058	0.044	
5775	155	802.11ac	OFDM	80	14.0	12.58	-0.14	Left	Cheek	1	1921M	29.3	94.5	0.051	-	1.387	1.058	-	
5775	155	802.11ac	OFDM	80	14.0	12.58	0.00	Left	Tilt	1	1921M	29.3	94.5	0.087	-	1.387	1.058	-	
5775	155	802.11ac	OFDM	80	14.0	12.85	-0.11	Right	Cheek	2	1921M	29.3	96.2	0.111	-	1.303	1.040	-	
5775	155	802.11ac	OFDM	80	14.0	12.85	0.18	Right	Tilt	2	1921M	29.3	96.2	0.163	-	1.303	1.040	-	
5775	155	802.11ac	OFDM	80	14.0	12.85	0.16	Left	Cheek	2	1921M	29.3	96.2	0.138	-	1.303	1.040	-	
5775	155	802.11ac	OFDM	80	14.0	12.85	0.11	Left	Tilt	2	1921M	29.3	96.2	0.166	0.057	1.303	1.040	0.077	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Head
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Table 11-14
DSS Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)			(W/kg)	
2402.00	0	Bluetooth	FHSS	16.5	16.18	0.16	Right	Cheek	1921M	1	77.1	0.024	1.076	1.297	0.033	
2402.00	0	Bluetooth	FHSS	16.5	16.18	0.16	Right	Tilt	1921M	1	77.1	0.035	1.076	1.297	**0.049**	A14
2402.00	0	Bluetooth	FHSS	16.5	16.18	0.14	Left	Cheek	1921M	1	77.1	0.021	1.076	1.297	0.029	
2402.00	0	Bluetooth	FHSS	16.5	16.18	0.11	Left	Tilt	1921M	1	77.1	0.026	1.076	1.297	0.036	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**									**Head** **1.6 W/kg (mW/g)** averaged over 1 gram							

11.2 Standalone Body-Worn SAR Data

Table 11-15
GSM/UMTS Body-Worn SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Spacing	Device Serial Number	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
836.60	190	GSM 850	GSM	33.0	32.14	N/A	-0.01	15 mm	1954M	1:8.3	back	0.107	1.219	0.130	A15
1880.00	661	GSM 1900	GSM	30.0	29.55	N/A	-0.01	15 mm	1876M	1:8.3	back	0.169	1.109	0.187	A17
836.60	4183	UMTS 850	RMC	25.0	24.74	16	0.01	15 mm	1954M	1:1	back	0.163	1.062	0.173	A19
1712.40	1312	UMTS 1750	RMC	24.0	23.49	N/A	0.03	15 mm	1940M	1:1	back	0.559	1.125	0.629	
1732.40	1412	UMTS 1750	RMC	24.0	23.82	N/A	0.05	15 mm	1940M	1:1	back	0.635	1.042	0.662	
1752.60	1513	UMTS 1750	RMC	24.0	23.80	N/A	0.03	15 mm	1940M	1:1	back	0.685	1.047	**0.717**	A21
1880.00	9400	UMTS 1900	RMC	24.0	23.82	N/A	-0.01	15 mm	1876M	1:1	back	0.369	1.042	0.384	A23
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**									**Body** **1.6 W/kg (mW/g)** averaged over 1 gram						

Table 11-16
LTE Body-Worn SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	25	0.09	0	1954M	QPSK	1	25	15 mm	back	1:1	0.166	1.242	0.206	A25
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	25	0.05	1	1954M	QPSK	25	0	15 mm	back	1:1	0.137	1.230	0.169	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	11	0.17	0	1954M	QPSK	1	0	15 mm	back	1:1	0.203	1.247	0.253	A27
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	11	0.02	1	1954M	QPSK	25	12	15 mm	back	1:1	0.171	1.239	0.212	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	2	0.05	0	1940M	QPSK	1	0	15 mm	back	1:1	0.119	1.125	0.134	A29
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	2	0.03	1	1940M	QPSK	36	18	15 mm	back	1:1	0.104	1.094	0.114	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.38	N/A	-0.09	0	1908M	QPSK	1	99	15 mm	back	1:1	0.568	1.153	0.655	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.65	N/A	0.01	0	1908M	QPSK	1	50	15 mm	back	1:1	0.607	1.084	0.658	A31
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	N/A	-0.05	0	1908M	QPSK	1	0	15 mm	back	1:1	0.576	1.074	0.619	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	N/A	-0.02	1	1908M	QPSK	50	25	15 mm	back	1:1	0.458	1.030	0.472	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	N/A	0.00	0	1908M	QPSK	1	99	15 mm	back	1:1	0.331	1.069	0.354	A33
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	N/A	0.02	1	1908M	QPSK	50	50	15 mm	back	1:1	0.263	1.057	0.278	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	N/A	0.04	0	1874M	QPSK	1	0	15 mm	back	1:1.58	0.115	1.148	0.132	A35
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	N/A	-0.03	1	1874M	QPSK	50	0	15 mm	back	1:1.58	0.091	1.112	0.101	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-17
DTS Body-Worn SAR

MEASUREMENT RESULTS																		
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2412	1	802.11b	DSSS	22	20.0	19.97	0.15	15 mm	1	1921M	1	back	99.9	0.074	0.049	1.007	1.001	0.049	
2412	1	802.11b	DSSS	22	20.0	19.98	0.04	15 mm	2	1921M	1	back	99.9	0.083	0.056	1.005	1.001	**0.056**	A37
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram					

Table 11-18
NII Body-Worn SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
5320	64	802.11a	OFDM	20	18.0	17.91	-0.09	15 mm	1	1968M	6	back	98.8	0.463	0.197	1.021	1.012	0.204	
5280	56	802.11a	OFDM	20	18.0	17.99	0.05	15 mm	2	1968M	6	back	98.7	0.177	0.087	1.002	1.013	0.088	
5500	100	802.11a	OFDM	20	18.0	17.94	-0.18	15 mm	1	1968M	6	back	98.8	0.790	0.375	1.014	1.012	**0.385**	A39
5720	144	802.11a	OFDM	20	18.0	17.98	-0.10	15 mm	2	1968M	6	back	98.7	0.327	0.142	1.005	1.013	0.145	
5785	157	802.11a	OFDM	20	18.0	17.97	-0.12	15 mm	1	1968M	6	back	98.8	0.424	0.149	1.007	1.012	0.152	
5785	157	802.11a	OFDM	20	18.0	17.86	-0.06	15 mm	2	1968M	6	back	98.7	0.428	0.161	1.033	1.013	0.168	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Body
Spatial Peak Uncontrolled Exposure/General Population	1.6 W/kg (mW/g) averaged over 1 gram

Table 11-19
DSS Body-Worn SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)			(W/kg)	
2402	0	Bluetooth	FHSS	16.5	16.18	0.18	15 mm	1921M	1	back	77.1	0.016	1.076	1.297	**0.022**	A41

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Body
Spatial Peak Uncontrolled Exposure/General Population	1.6 W/kg (mW/g) averaged over 1 gram

11.3 Standalone Hotspot SAR Data

Table 11-20
GPRS/UMTS Hotspot SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Spacing	Device Serial Number	# of GPRS Slots	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
836.60	190	GSM 850	GPRS	30.5	29.89	N/A	-0.04	10 mm	1954M	3	1:2.76	back	0.335	1.151	0.386	
836.60	190	GSM 850	GPRS	30.5	29.89	N/A	-0.16	10 mm	1954M	3	1:2.76	front	0.204	1.151	0.235	
836.60	190	GSM 850	GPRS	30.5	29.89	N/A	-0.16	10 mm	1954M	3	1:2.76	bottom	0.195	1.151	0.224	
836.60	190	GSM 850	GPRS	30.5	29.89	N/A	-0.05	10 mm	1954M	3	1:2.76	right	0.489	1.151	0.563	A16
1880.00	661	GSM 1900	GPRS	24.5	23.96	N/A	-0.04	10 mm	1876M	3	1:2.76	back	0.373	1.132	0.422	
1880.00	661	GSM 1900	GPRS	24.5	23.96	N/A	0.08	10 mm	1876M	3	1:2.76	front	0.167	1.132	0.189	
1850.20	512	GSM 1900	GPRS	24.5	23.68	N/A	-0.08	10 mm	1876M	3	1:2.76	bottom	0.815	1.208	**0.985**	A18
1880.00	661	GSM 1900	GPRS	24.5	23.96	N/A	-0.03	10 mm	1876M	3	1:2.76	bottom	0.785	1.132	0.889	
1909.80	810	GSM 1900	GPRS	24.5	23.56	N/A	-0.08	10 mm	1876M	3	1:2.76	bottom	0.715	1.242	0.888	
1880.00	661	GSM 1900	GPRS	24.5	23.96	N/A	-0.08	10 mm	1876M	3	1:2.76	right	0.123	1.132	0.139	
1880.00	661	GSM 1900	GPRS	24.5	23.96	N/A	-0.08	10 mm	1876M	3	1:2.76	left	0.088	1.132	0.100	
836.60	4183	UMTS 850	RMC	25.0	24.74	16	0.04	10 mm	1940M	N/A	1:1	back	0.254	1.062	0.270	
836.60	4183	UMTS 850	RMC	25.0	24.74	16	0.04	10 mm	1940M	N/A	1:1	front	0.199	1.062	0.211	
836.60	4183	UMTS 850	RMC	25.0	24.74	16	-0.04	10 mm	1940M	N/A	1:1	bottom	0.237	1.062	0.252	
836.60	4183	UMTS 850	RMC	25.0	24.74	16	-0.06	10 mm	1940M	N/A	1:1	right	0.533	1.062	0.566	A20
1732.40	1412	UMTS 1750	RMC	20.0	19.44	N/A	-0.08	10 mm	1940M	N/A	1:1	back	0.437	1.138	0.497	
1732.40	1412	UMTS 1750	RMC	20.0	19.44	N/A	0.00	10 mm	1940M	N/A	1:1	front	0.205	1.138	0.233	
1712.40	1312	UMTS 1750	RMC	20.0	19.38	N/A	0.19	10 mm	1940M	N/A	1:1	bottom	0.553	1.153	0.638	
1732.40	1412	UMTS 1750	RMC	20.0	19.44	N/A	-0.06	10 mm	1940M	N/A	1:1	bottom	0.609	1.138	0.693	
1752.60	1513	UMTS 1750	RMC	20.0	19.56	N/A	-0.06	10 mm	1940M	N/A	1:1	bottom	0.673	1.107	0.745	A22
1732.40	1412	UMTS 1750	RMC	20.0	19.44	N/A	0.03	10 mm	1940M	N/A	1:1	right	0.153	1.138	0.174	
1732.40	1412	UMTS 1750	RMC	20.0	19.44	N/A	0.06	10 mm	1940M	N/A	1:1	left	0.119	1.138	0.135	
1880.00	9400	UMTS 1900	RMC	20.0	19.93	N/A	-0.07	10 mm	1876M	N/A	1:1	back	0.290	1.016	0.295	
1880.00	9400	UMTS 1900	RMC	20.0	19.93	N/A	0.04	10 mm	1876M	N/A	1:1	front	0.156	1.016	0.158	
1852.40	9262	UMTS 1900	RMC	20.0	19.77	N/A	-0.07	10 mm	1876M	N/A	1:1	bottom	0.670	1.054	0.706	
1880.00	9400	UMTS 1900	RMC	20.0	19.93	N/A	-0.06	10 mm	1876M	N/A	1:1	bottom	0.742	1.016	0.754	A24
1907.60	9538	UMTS 1900	RMC	20.0	20.00	N/A	-0.08	10 mm	1876M	N/A	1:1	bottom	0.655	1.000	0.655	
1880.00	9400	UMTS 1900	RMC	20.0	19.93	N/A	0.03	10 mm	1876M	N/A	1:1	right	0.116	1.016	0.118	
1880.00	9400	UMTS 1900	RMC	20.0	19.93	N/A	-0.02	10 mm	1876M	N/A	1:1	left	0.075	1.016	0.076	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**								**Body** **1.6 W/kg (mW/g)** averaged over 1 gram								

Table 11-21
LTE Band 12 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	25	0.07	0	1954M	QPSK	1	25	10 mm	back	1:1	0.235	1.242	0.292	A26
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	25	0.05	1	1954M	QPSK	25	0	10 mm	back	1:1	0.195	1.230	0.240	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	25	0.06	0	1954M	QPSK	1	25	10 mm	front	1:1	0.153	1.242	0.190	
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	25	-0.01	1	1954M	QPSK	25	0	10 mm	front	1:1	0.129	1.230	0.159	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	25	-0.08	0	1954M	QPSK	1	25	10 mm	bottom	1:1	0.033	1.242	0.041	
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	25	0.05	1	1954M	QPSK	25	0	10 mm	bottom	1:1	0.028	1.230	0.034	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	25	-0.10	0	1954M	QPSK	1	25	10 mm	right	1:1	0.125	1.242	0.155	
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	25	-0.01	1	1954M	QPSK	25	0	10 mm	right	1:1	0.094	1.230	0.116	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-22
LTE Band 13 Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	11	0.14	0	1954M	QPSK	1	0	10 mm	back	1:1	0.313	1.247	0.390	A28
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	11	0.12	1	1954M	QPSK	25	12	10 mm	back	1:1	0.261	1.239	0.323	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	11	0.01	0	1954M	QPSK	1	0	10 mm	front	1:1	0.064	1.247	0.080	
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	11	-0.05	1	1954M	QPSK	25	12	10 mm	front	1:1	0.055	1.239	0.068	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	11	0.04	0	1954M	QPSK	1	0	10 mm	bottom	1:1	0.050	1.247	0.062	
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	11	-0.05	1	1954M	QPSK	25	12	10 mm	bottom	1:1	0.044	1.239	0.055	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	11	0.02	0	1954M	QPSK	1	0	10 mm	right	1:1	0.159	1.247	0.198	
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	11	-0.09	1	1954M	QPSK	25	12	10 mm	right	1:1	0.129	1.239	0.160	
														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-23
LTE Band 26 (Cell) Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	2	0.05	0	1940M	QPSK	1	0	10 mm	back	1:1	0.298	1.125	0.335	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	2	0.01	1	1940M	QPSK	36	18	10 mm	back	1:1	0.244	1.094	0.267	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	2	-0.02	0	1940M	QPSK	1	0	10 mm	front	1:1	0.211	1.125	0.237	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	2	-0.03	1	1940M	QPSK	36	18	10 mm	front	1:1	0.176	1.094	0.193	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	2	-0.03	0	1940M	QPSK	1	0	10 mm	bottom	1:1	0.220	1.125	0.248	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	2	-0.01	1	1940M	QPSK	36	18	10 mm	bottom	1:1	0.187	1.094	0.205	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	2	0.20	0	1940M	QPSK	1	0	10 mm	right	1:1	0.500	1.125	0.563	A30
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	2	0.16	1	1940M	QPSK	36	18	10 mm	right	1:1	0.416	1.094	0.455	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-24
LTE Band 66 (AWS) Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.32	-0.07	0	1908M	QPSK	1	0	10 mm	back	1:1	0.577	1.042	0.601	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.36	-0.10	0	1908M	QPSK	50	0	10 mm	back	1:1	0.580	1.033	0.599	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.32	0.06	0	1908M	QPSK	1	0	10 mm	front	1:1	0.261	1.042	0.272	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.36	0.03	0	1908M	QPSK	50	0	10 mm	front	1:1	0.264	1.033	0.273	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	18.91	0.02	0	1908M	QPSK	1	99	10 mm	bottom	1:1	0.744	1.146	0.853	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.5	19.05	0.02	0	1908M	QPSK	1	50	10 mm	bottom	1:1	0.814	1.109	0.903	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.32	-0.08	0	1908M	QPSK	1	0	10 mm	bottom	1:1	0.850	1.042	0.886	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	19.00	-0.02	0	1908M	QPSK	50	0	10 mm	bottom	1:1	0.743	1.122	0.834	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.5	19.28	-0.05	0	1908M	QPSK	50	25	10 mm	bottom	1:1	0.834	1.052	0.877	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.36	-0.03	0	1908M	QPSK	50	0	10 mm	bottom	1:1	0.869	1.033	0.898	A32
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.5	19.31	-0.04	0	1908M	QPSK	100	0	10 mm	bottom	1:1	0.821	1.045	0.858	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.32	-0.05	0	1908M	QPSK	1	0	10 mm	right	1:1	0.215	1.042	0.224	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.36	-0.03	0	1908M	QPSK	50	0	10 mm	right	1:1	0.212	1.033	0.219	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.32	-0.02	0	1908M	QPSK	1	0	10 mm	left	1:1	0.175	1.042	0.182	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.36	0.05	0	1908M	QPSK	50	0	10 mm	left	1:1	0.173	1.033	0.179	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-25
LTE Band 25 (PCS) Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.65	-0.01	0	1908M	QPSK	1	99	10 mm	back	1:1	0.380	1.084	0.412	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.80	0.02	0	1908M	QPSK	50	50	10 mm	back	1:1	0.373	1.047	0.391	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.65	0.02	0	1908M	QPSK	1	99	10 mm	front	1:1	0.190	1.084	0.206	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.80	0.06	0	1908M	QPSK	50	50	10 mm	front	1:1	0.190	1.047	0.199	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	19.43	-0.05	0	1908M	QPSK	1	99	10 mm	bottom	1:1	0.814	1.140	0.928	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.0	19.58	-0.02	0	1908M	QPSK	1	50	10 mm	bottom	1:1	0.828	1.102	0.912	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.65	-0.04	0	1908M	QPSK	1	99	10 mm	bottom	1:1	0.856	1.084	0.928	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	19.50	-0.03	0	1908M	QPSK	50	50	10 mm	bottom	1:1	0.837	1.122	0.939	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.0	19.72	-0.02	0	1908M	QPSK	50	50	10 mm	bottom	1:1	0.867	1.067	0.925	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.80	0.00	0	1908M	QPSK	50	50	10 mm	bottom	1:1	0.860	1.047	0.900	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.56	-0.04	0	1908M	QPSK	100	0	10 mm	bottom	1:1	0.877	1.107	0.971	A34
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.65	0.04	0	1908M	QPSK	1	99	10 mm	right	1:1	0.118	1.084	0.128	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.80	0.01	0	1908M	QPSK	50	50	10 mm	right	1:1	0.119	1.047	0.125	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.65	0.15	0	1908M	QPSK	1	99	10 mm	left	1:1	0.097	1.084	0.105	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.80	0.03	0	1908M	QPSK	50	50	10 mm	left	1:1	0.095	1.047	0.099	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-26
LTE Band 41 Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.77	-0.12	0	1874M	QPSK	1	0	10 mm	back	1:1.58	0.116	1.054	0.122	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.80	-0.20	0	1874M	QPSK	50	25	10 mm	back	1:1.58	0.112	1.047	0.117	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.77	0.01	0	1874M	QPSK	1	0	10 mm	front	1:1.58	0.135	1.054	0.142	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.80	0.04	0	1874M	QPSK	50	25	10 mm	front	1:1.58	0.137	1.047	0.143	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.77	-0.09	0	1874M	QPSK	1	0	10 mm	bottom	1:1.58	0.406	1.054	0.428	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.80	-0.09	0	1874M	QPSK	50	25	10 mm	bottom	1:1.58	0.418	1.047	0.438	A36
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.77	0.09	0	1874M	QPSK	1	0	10 mm	right	1:1.58	0.034	1.054	0.036	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.80	-0.17	0	1874M	QPSK	50	25	10 mm	right	1:1.58	0.037	1.047	0.039	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.77	-0.07	0	1874M	QPSK	1	0	10 mm	left	1:1.58	0.053	1.054	0.056	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.80	-0.16	0	1874M	QPSK	50	25	10 mm	left	1:1.58	0.056	1.047	0.059	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-27
WLAN Hotspot SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2412	1	802.11b	DSSS	22	20.0	19.97	0.04	10 mm	1	1921M	1	back	99.9	0.183	-	1.007	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.97	0.15	10 mm	1	1921M	1	front	99.9	0.041	-	1.007	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.97	0.20	10 mm	1	1921M	1	top	99.9	0.190	-	1.007	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.97	0.20	10 mm	1	1921M	1	right	99.9	0.218	0.114	1.007	1.001	0.115	
2412	1	802.11b	DSSS	22	20.0	19.98	0.18	10 mm	2	1921M	1	back	99.9	0.269	0.161	1.005	1.001	**0.162**	A38
2412	1	802.11b	DSSS	22	20.0	19.98	0.14	10 mm	2	1921M	1	front	99.9	0.057	-	1.005	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.98	0.14	10 mm	2	1921M	1	top	99.9	0.195	-	1.005	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.98	0.12	10 mm	2	1921M	1	left	99.9	0.064	-	1.005	1.001	-	
5785	157	802.11a	OFDM	20	18.0	17.97	0.14	10 mm	1	1968M	6	back	98.8	0.550	0.216	1.007	1.012	**0.220**	A40
5785	157	802.11a	OFDM	20	18.0	17.97	0.00	10 mm	1	1968M	6	front	98.8	0.071	-	1.007	1.012	-	
5785	157	802.11a	OFDM	20	18.0	17.97	-0.18	10 mm	1	1968M	6	top	98.8	0.201	-	1.007	1.012	-	
5785	157	802.11a	OFDM	20	18.0	17.97	0.05	10 mm	1	1968M	6	right	98.8	0.178	-	1.007	1.012	-	
5785	157	802.11a	OFDM	20	18.0	17.86	-0.13	10 mm	2	1968M	6	back	98.7	0.537	0.213	1.033	1.013	**0.223**	
5785	157	802.11a	OFDM	20	18.0	17.86	0.15	10 mm	2	1968M	6	front	98.7	0.173	-	1.033	1.013	-	
5785	157	802.11a	OFDM	20	18.0	17.86	-0.12	10 mm	2	1968M	6	top	98.7	0.528	-	1.033	1.013	-	
5785	157	802.11a	OFDM	20	18.0	17.86	-0.15	10 mm	2	1968M	6	left	98.7	0.121	-	1.033	1.013	-	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	**Body**
Spatial Peak	**1.6 W/kg (mW/g)**
Uncontrolled Exposure/General Population	averaged over 1 gram

Table 11-28
DSS Hotspot SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)			(W/kg)	
2402	0	Bluetooth	FHSS	16.5	16.18	0.11	10 mm	1921M	1	back	77.1	0.034	1.076	1.297	0.047	
2402	0	Bluetooth	FHSS	16.5	16.18	0.16	10 mm	1921M	1	front	77.1	0.006	1.076	1.297	0.008	
2402	0	Bluetooth	FHSS	16.5	16.18	-0.01	10 mm	1921M	1	top	77.1	0.047	1.076	1.297	**0.066**	A42
2402	0	Bluetooth	FHSS	16.5	16.18	0.13	10 mm	1921M	1	right	77.1	0.038	1.076	1.297	0.053	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	**Body**
Spatial Peak	**1.6 W/kg (mW/g)**
Uncontrolled Exposure/General Population	averaged over 1 gram

11.4 Standalone Phablet SAR Data

Table 11-29
GPRS/UMTS Phablet SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	# of GPRS Slots	Duty Cycle	Side	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1880.00	661	GSM 1900	GPRS	27.5	26.89	0.15	7 mm	1908M	3	1:2.76	back	0.431	1.151	0.496	
1880.00	661	GSM 1900	GPRS	27.5	26.89	0.03	0 mm	1908M	3	1:2.76	front	0.687	1.151	0.791	
1880.00	661	GSM 1900	GPRS	27.5	26.89	-0.06	11 mm	1908M	3	1:2.76	bottom	0.478	1.151	0.550	
1880.00	661	GSM 1900	GPRS	27.5	26.89	0.00	0 mm	1908M	3	1:2.76	right	0.448	1.151	0.516	
1880.00	661	GSM 1900	GPRS	27.5	26.89	-0.12	0 mm	1908M	3	1:2.76	left	0.199	1.151	0.229	
1880.00	661	GSM 1900	GPRS	24.5	23.96	0.02	0 mm	1908M	3	1:2.76	back	1.260	1.132	1.426	
1850.20	512	GSM 1900	GPRS	24.5	23.68	0.14	0 mm	1908M	3	1:2.76	bottom	2.310	1.208	**2.790**	A43
1880.00	661	GSM 1900	GPRS	24.5	23.96	-0.10	0 mm	1908M	3	1:2.76	bottom	2.150	1.132	2.434	
1909.80	810	GSM 1900	GPRS	24.5	23.56	-0.10	0 mm	1908M	3	1:2.76	bottom	1.950	1.242	2.422	
1732.40	1412	UMTS 1750	RMC	24.0	23.82	0.06	7 mm	1897M	N/A	1:1	back	0.912	1.042	0.950	
1732.40	1412	UMTS 1750	RMC	24.0	23.82	-0.04	0 mm	1897M	N/A	1:1	front	1.230	1.042	1.282	
1732.40	1412	UMTS 1750	RMC	24.0	23.82	0.00	11 mm	1897M	N/A	1:1	bottom	0.688	1.042	0.717	
1732.40	1412	UMTS 1750	RMC	24.0	23.82	-0.18	0 mm	1897M	N/A	1:1	right	1.080	1.042	1.125	
1732.40	1412	UMTS 1750	RMC	24.0	23.82	0.15	0 mm	1897M	N/A	1:1	left	0.417	1.042	0.435	
1732.40	1412	UMTS 1750	RMC	20.0	19.44	-0.17	0 mm	1875M	N/A	1:1	back	1.290	1.138	1.468	
1712.40	1312	UMTS 1750	RMC	20.0	19.38	-0.13	0 mm	1875M	N/A	1:1	bottom	1.770	1.153	2.041	
1732.40	1412	UMTS 1750	RMC	20.0	19.44	-0.12	0 mm	1875M	N/A	1:1	bottom	1.860	1.138	2.117	
1752.60	1513	UMTS 1750	RMC	20.0	19.56	-0.15	0 mm	1875M	N/A	1:1	bottom	2.130	1.107	2.358	A44
1880.00	9400	UMTS 1900	RMC	24.0	23.82	-0.06	7 mm	1897M	N/A	1:1	back	0.580	1.042	0.604	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	0.01	0 mm	1897M	N/A	1:1	front	0.881	1.042	0.918	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	-0.01	11 mm	1897M	N/A	1:1	bottom	0.724	1.042	0.754	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	-0.02	0 mm	1897M	N/A	1:1	right	0.634	1.042	0.661	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	-0.19	0 mm	1897M	N/A	1:1	left	0.310	1.042	0.323	
1880.00	9400	UMTS 1900	RMC	20.0	19.93	0.00	0 mm	1897M	N/A	1:1	back	0.901	1.016	0.915	
1852.40	9262	UMTS 1900	RMC	20.0	19.77	-0.01	0 mm	1897M	N/A	1:1	bottom	2.160	1.054	2.277	
1880.00	9400	UMTS 1900	RMC	20.0	19.93	-0.02	0 mm	1897M	N/A	1:1	bottom	2.320	1.016	2.357	
1907.60	9538	UMTS 1900	RMC	20.0	20.00	0.00	0 mm	1897M	N/A	1:1	bottom	2.370	1.000	2.370	A45
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**												**Phablet** **4.0 W/kg (mW/g)** averaged over 10 grams			

Table 11-30
LTE Band 66 (AWS) Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	-0.08	0	1908M	QPSK	1	0	7 mm	back	1:1	0.987	1.074	1.060	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	-0.08	1	1908M	QPSK	50	25	7 mm	back	1:1	0.801	1.030	0.825	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	0.09	0	1908M	QPSK	1	0	0 mm	front	1:1	1.360	1.074	1.461	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	0.09	1	1908M	QPSK	50	25	0 mm	front	1:1	1.100	1.030	1.133	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	-0.04	0	1908M	QPSK	1	0	11 mm	bottom	1:1	0.793	1.074	0.852	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	-0.01	1	1908M	QPSK	50	25	11 mm	bottom	1:1	0.643	1.030	0.662	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	0.11	0	1908M	QPSK	1	0	0 mm	right	1:1	1.050	1.074	1.128	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	0.03	1	1908M	QPSK	50	25	0 mm	right	1:1	0.862	1.030	0.888	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	0.11	0	1908M	QPSK	1	0	0 mm	left	1:1	0.451	1.074	0.484	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	-0.19	1	1908M	QPSK	50	25	0 mm	left	1:1	0.383	1.030	0.394	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.32	0.07	0	1908M	QPSK	1	0	0 mm	back	1:1	1.760	1.042	1.834	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.36	0.07	0	1908M	QPSK	50	0	0 mm	back	1:1	1.820	1.033	1.880	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	18.91	-0.02	0	1908M	QPSK	1	99	0 mm	bottom	1:1	2.300	1.146	2.636	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.5	19.05	-0.05	0	1908M	QPSK	1	50	0 mm	bottom	1:1	2.430	1.109	2.695	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.32	-0.10	0	1908M	QPSK	1	0	0 mm	bottom	1:1	2.480	1.042	2.584	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	19.00	-0.08	0	1908M	QPSK	50	0	0 mm	bottom	1:1	2.390	1.122	2.682	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.5	19.28	-0.09	0	1908M	QPSK	50	25	0 mm	bottom	1:1	2.570	1.052	2.704	A46
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.36	-0.07	0	1908M	QPSK	50	0	0 mm	bottom	1:1	2.560	1.033	2.644	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.5	19.31	-0.10	0	1908M	QPSK	100	0	0 mm	bottom	1:1	2.560	1.045	2.675	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Phablet
Spatial Peak	4.0 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 10 grams

Table 11-31
LTE Band 25 (PCS) Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	0.04	0	1908M	QPSK	1	99	7 mm	back	1:1	0.590	1.069	0.631	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	0.01	1	1908M	QPSK	50	50	7 mm	back	1:1	0.472	1.057	0.499	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	-0.07	0	1908M	QPSK	1	99	0 mm	front	1:1	1.020	1.069	1.090	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	-0.05	1	1908M	QPSK	50	50	0 mm	front	1:1	0.806	1.057	0.852	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	0.02	0	1908M	QPSK	1	99	11 mm	bottom	1:1	0.806	1.069	0.862	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	0.01	1	1908M	QPSK	50	50	11 mm	bottom	1:1	0.644	1.057	0.681	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	0.11	0	1908M	QPSK	1	99	0 mm	right	1:1	0.646	1.069	0.691	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	0.04	1	1908M	QPSK	50	50	0 mm	right	1:1	0.499	1.057	0.527	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	0.02	0	1908M	QPSK	1	99	0 mm	left	1:1	0.281	1.069	0.300	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	0.02	1	1908M	QPSK	50	50	0 mm	left	1:1	0.218	1.057	0.230	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.65	0.01	0	1908M	QPSK	1	99	0 mm	back	1:1	1.290	1.084	1.398	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.80	0.02	0	1908M	QPSK	50	50	0 mm	back	1:1	1.310	1.047	1.372	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	19.43	-0.01	0	1908M	QPSK	1	99	0 mm	bottom	1:1	2.130	1.140	2.428	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.0	19.58	0.00	0	1908M	QPSK	1	50	0 mm	bottom	1:1	2.200	1.102	2.424	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.65	-0.03	0	1908M	QPSK	1	99	0 mm	bottom	1:1	2.220	1.084	2.406	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	19.50	-0.01	0	1908M	QPSK	50	50	0 mm	bottom	1:1	2.200	1.122	2.468	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.0	19.72	-0.04	0	1908M	QPSK	50	50	0 mm	bottom	1:1	2.290	1.067	2.443	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.80	-0.01	0	1908M	QPSK	50	50	0 mm	bottom	1:1	2.310	1.047	2.419	A47
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.56	-0.05	0	1908M	QPSK	100	0	0 mm	bottom	1:1	2.290	1.107	2.535	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Phablet 4.0 W/kg (mW/g) averaged over 10 grams			

Table 11-32
LTE Band 41 Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	-0.08	0	1874M	QPSK	1	0	7 mm	back	1:1.58	0.214	1.148	0.246	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	-0.11	1	1874M	QPSK	50	0	7 mm	back	1:1.58	0.174	1.112	0.193	
2506.00	39750	Low	LTE Band 41	20	24.0	23.38	-0.04	0	1874M	QPSK	1	0	0 mm	front	1:1.58	1.810	1.153	2.087	
2549.50	40185	Low-Mid	LTE Band 41	20	24.0	23.22	-0.19	0	1874M	QPSK	1	50	0 mm	front	1:1.58	1.650	1.197	1.975	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	-0.16	0	1874M	QPSK	1	0	0 mm	front	1:1.58	1.450	1.148	1.665	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.26	-0.07	0	1874M	QPSK	1	0	0 mm	front	1:1.58	1.520	1.186	1.803	
2680.00	41490	High	LTE Band 41	20	24.0	23.39	-0.12	0	1874M	QPSK	1	99	0 mm	front	1:1.58	1.310	1.151	1.508	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	-0.14	1	1874M	QPSK	50	0	0 mm	front	1:1.58	1.170	1.112	1.301	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.49	-0.13	1	1874M	QPSK	100	0	0 mm	front	1:1.58	1.280	1.125	1.440	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	-0.10	0	1874M	QPSK	1	0	11 mm	bottom	1:1.58	0.387	1.148	0.444	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	-0.08	1	1874M	QPSK	50	0	11 mm	bottom	1:1.58	0.310	1.112	0.345	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	0.17	0	1874M	QPSK	1	0	0 mm	right	1:1.58	0.269	1.148	0.309	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	-0.08	1	1874M	QPSK	50	0	0 mm	right	1:1.58	0.213	1.112	0.237	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	-0.12	0	1874M	QPSK	1	0	0 mm	left	1:1.58	0.473	1.148	0.543	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	-0.18	1	1874M	QPSK	50	0	0 mm	left	1:1.58	0.421	1.112	0.468	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.77	-0.01	0	1874M	QPSK	1	0	0 mm	back	1:1.58	0.529	1.054	0.558	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.80	0.01	0	1874M	QPSK	50	25	0 mm	back	1:1.58	0.542	1.047	0.567	
2506.00	39750	Low	LTE Band 41	20	21.0	20.72	0.10	0	1874M	QPSK	1	50	0 mm	bottom	1:1.58	1.850	1.067	1.974	
2549.50	40185	Low-Mid	LTE Band 41	20	21.0	20.67	0.17	0	1874M	QPSK	1	0	0 mm	bottom	1:1.58	1.760	1.079	1.899	
2593.00	40620	Mid	LTE Band 41	20	21.0	20.48	0.16	0	1874M	QPSK	1	50	0 mm	bottom	1:1.58	1.720	1.127	1.938	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.77	0.19	0	1874M	QPSK	1	0	0 mm	bottom	1:1.58	1.740	1.054	1.834	
2680.00	41490	High	LTE Band 41	20	21.0	20.76	0.13	0	1874M	QPSK	1	99	0 mm	bottom	1:1.58	1.800	1.057	1.903	
2506.00	39750	Low	LTE Band 41	20	21.0	20.71	0.14	0	1874M	QPSK	50	25	0 mm	bottom	1:1.58	1.900	1.069	2.031	A48
2549.50	40185	Low-Mid	LTE Band 41	20	21.0	20.63	0.12	0	1874M	QPSK	50	25	0 mm	bottom	1:1.58	1.810	1.089	1.971	
2593.00	40620	Mid	LTE Band 41	20	21.0	20.68	0.13	0	1874M	QPSK	50	25	0 mm	bottom	1:1.58	1.790	1.076	1.926	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.80	0.11	0	1874M	QPSK	50	25	0 mm	bottom	1:1.58	1.780	1.047	1.864	
2680.00	41490	High	LTE Band 41	20	21.0	20.76	0.14	0	1874M	QPSK	50	0	0 mm	bottom	1:1.58	1.860	1.057	1.966	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.66	0.12	0	1874M	QPSK	100	0	0 mm	bottom	1:1.58	1.780	1.081	1.924	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Phablet 4.0 W/kg (mW/g) averaged over 10 grams			

Table 11-33
WLAN Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
5320	64	802.11a	OFDM	20	18.0	17.91	-0.16	0 mm	1	1968M	6	back	98.8	5.857	0.573	1.021	1.012	0.592	
5320	64	802.11a	OFDM	20	18.0	17.91	-0.17	0 mm	1	1968M	6	front	98.8	0.509	-	1.021	1.012	-	
5320	64	802.11a	OFDM	20	18.0	17.91	-0.08	0 mm	1	1968M	6	top	98.8	2.051	-	1.021	1.012	-	
5320	64	802.11a	OFDM	20	18.0	17.91	0.19	0 mm	1	1968M	6	right	98.8	0.462	-	1.021	1.012	-	
5280	56	802.11a	OFDM	20	18.0	17.99	-0.03	0 mm	2	1968M	6	back	98.7	4.330	-	1.002	1.013	-	
5280	56	802.11a	OFDM	20	18.0	17.99	-0.21	0 mm	2	1968M	6	front	98.7	0.671	-	1.002	1.013	-	
5280	56	802.11a	OFDM	20	18.0	17.99	-0.15	0 mm	2	1968M	6	top	98.7	5.875	0.679	1.002	1.013	0.689	
5280	56	802.11a	OFDM	20	18.0	17.99	0.01	0 mm	2	1968M	6	left	98.7	0.712	-	1.002	1.013	-	
5500	100	802.11a	OFDM	20	18.0	17.94	-0.08	0 mm	1	1968M	6	back	98.8	8.385	0.825	1.014	1.012	0.847	
5500	100	802.11a	OFDM	20	18.0	17.94	0.00	0 mm	1	1968M	6	front	98.8	0.317	-	1.014	1.012	-	
5500	100	802.11a	OFDM	20	18.0	17.94	-0.15	0 mm	1	1968M	6	top	98.8	2.834	-	1.014	1.012	-	
5500	100	802.11a	OFDM	20	18.0	17.94	-0.07	0 mm	1	1968M	6	right	98.8	0.613	-	1.014	1.012	-	
5720	144	802.11a	OFDM	20	18.0	17.98	-0.15	0 mm	2	1968M	6	back	98.7	11.116	1.060	1.005	1.013	**1.079**	A49
5720	144	802.11a	OFDM	20	18.0	17.98	0.03	0 mm	2	1968M	6	front	98.7	0.952	-	1.005	1.013	-	
5720	144	802.11a	OFDM	20	18.0	17.98	-0.13	0 mm	2	1968M	6	top	98.7	8.300	0.943	1.005	1.013	0.960	
5720	144	802.11a	OFDM	20	18.0	17.98	-0.03	0 mm	2	1968M	6	left	98.7	1.107	-	1.005	1.013	-	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Phablet
Spatial Peak	4.0 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 10 grams

Table 11-34
WLAN MIMO Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	-0.21	0 mm	MIMO	1968M	13	back	98.6	4.869	-	1.023	1.014	-	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	-0.17	0 mm	MIMO	1968M	13	front	98.6	1.206	-	1.023	1.014	-	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	-0.18	0 mm	MIMO	1968M	13	top	98.6	8.376	0.870	1.023	1.014	0.902	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	0.08	0 mm	MIMO	1968M	13	right	98.6	0.624	-	1.023	1.014	-	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	0.04	0 mm	MIMO	1968M	13	left	98.6	0.998	-	1.023	1.014	-	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	0.08	0 mm	MIMO	1968M	13	back	98.6	11.541	0.933	1.033	1.014	0.977	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	-0.16	0 mm	MIMO	1968M	13	front	98.6	0.828	-	1.033	1.014	-	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	0.13	0 mm	MIMO	1968M	13	top	98.6	10.209	-	1.033	1.014	-	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	0.08	0 mm	MIMO	1968M	13	right	98.6	0.893	-	1.033	1.014	-	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	0.12	0 mm	MIMO	1968M	13	left	98.6	0.907	-	1.033	1.014	-	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Phablet
Spatial Peak	4.0 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 10 grams

Note: To achieve the 21.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18.0 dBm.

11.5 Standalone UMPC Body SAR

Table 11-35
GPRS/UMTS UMPC Body SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Spacing	Device Serial Number	# of GPRS Slots	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
836.60	190	GSM 850	GPRS	30.5	29.89	N/A	-0.13	10 mm	1954M	3	1:2.76	back	0.467	1.151	0.538	
836.60	190	GSM 850	GPRS	30.5	29.89	N/A	0.00	10 mm	1954M	3	1:2.76	front	0.472	1.151	0.543	A50
836.60	190	GSM 850	GPRS	30.5	29.89	N/A	0.05	10 mm	1954M	3	1:2.76	bottom	0.337	1.151	0.388	
836.60	190	GSM 850	GPRS	30.5	29.89	N/A	-0.12	10 mm	1954M	3	1:2.76	right	0.332	1.151	0.382	
1880.00	661	GSM 1900	GPRS	27.5	26.89	N/A	-0.15	10 mm	1908M	3	1:2.76	back	0.510	1.151	0.587	
1880.00	661	GSM 1900	GPRS	27.5	26.89	N/A	-0.11	10 mm	1908M	3	1:2.76	front	0.414	1.151	0.477	
1880.00	661	GSM 1900	GPRS	27.5	26.89	N/A	-0.04	13 mm	1908M	3	1:2.76	bottom	0.529	1.151	0.609	
1850.20	512	GSM 1900	GPRS	24.5	23.68	N/A	-0.04	10 mm	1908M	3	1:2.76	bottom	0.574	1.208	0.693	
1880.00	661	GSM 1900	GPRS	24.5	23.96	N/A	-0.03	10 mm	1908M	3	1:2.76	bottom	0.586	1.132	0.663	A51
1909.80	810	GSM 1900	GPRS	24.5	23.56	N/A	-0.08	10 mm	1908M	3	1:2.76	bottom	0.464	1.242	0.576	
1880.00	661	GSM 1900	GPRS	27.5	26.89	N/A	-0.18	10 mm	1908M	3	1:2.76	right	0.121	1.151	0.139	
826.40	4132	UMTS 850	RMC	25.0	24.85	16	-0.12	10 mm	1940M	N/A	1:1	back	0.547	1.035	0.566	
836.60	4183	UMTS 850	RMC	25.0	24.74	16	-0.13	10 mm	1940M	N/A	1:1	back	0.567	1.062	0.602	A52
846.60	4233	UMTS 850	RMC	25.0	24.51	16	-0.13	10 mm	1940M	N/A	1:1	back	0.564	1.119	0.631	
836.60	4183	UMTS 850	RMC	25.0	24.74	16	-0.03	10 mm	1940M	N/A	1:1	front	0.496	1.062	0.527	
836.60	4183	UMTS 850	RMC	25.0	24.74	16	-0.06	10 mm	1940M	N/A	1:1	bottom	0.326	1.062	0.346	
836.60	4183	UMTS 850	RMC	25.0	24.74	16	-0.12	10 mm	1940M	N/A	1:1	right	0.133	1.062	0.141	
1712.40	1312	UMTS 1750	RMC	24.0	23.49	N/A	-0.06	10 mm	1875M	N/A	1:1	back	0.720	1.125	0.810	
1732.40	1412	UMTS 1750	RMC	24.0	23.82	N/A	-0.06	10 mm	1875M	N/A	1:1	back	0.820	1.042	0.854	
1752.60	1513	UMTS 1750	RMC	24.0	23.80	N/A	-0.07	10 mm	1875M	N/A	1:1	back	0.934	1.047	0.978	
1712.40	1312	UMTS 1750	RMC	24.0	23.49	N/A	0.00	10 mm	1875M	N/A	1:1	front	0.924	1.125	1.040	
1732.40	1412	UMTS 1750	RMC	24.0	23.82	N/A	0.01	10 mm	1875M	N/A	1:1	front	1.060	1.042	1.105	
1752.60	1513	UMTS 1750	RMC	24.0	23.80	N/A	0.00	10 mm	1875M	N/A	1:1	front	1.110	1.047	**1.162**	A53
1712.40	1312	UMTS 1750	RMC	24.0	23.49	N/A	-0.01	13 mm	1875M	N/A	1:1	bottom	0.687	1.125	0.773	
1732.40	1412	UMTS 1750	RMC	24.0	23.82	N/A	-0.02	13 mm	1875M	N/A	1:1	bottom	0.817	1.042	0.851	
1752.60	1513	UMTS 1750	RMC	24.0	23.80	N/A	0.00	13 mm	1875M	N/A	1:1	bottom	0.977	1.047	1.023	
1732.40	1412	UMTS 1750	RMC	20.0	19.44	N/A	-0.01	10 mm	1875M	N/A	1:1	bottom	0.498	1.138	0.567	
1732.40	1412	UMTS 1750	RMC	24.0	23.82	N/A	0.01	10 mm	1875M	N/A	1:1	right	0.376	1.042	0.392	
1752.60	1513	UMTS 1750	RMC	24.0	23.80	N/A	0.00	10 mm	1875M	N/A	1:1	front	1.030	1.047	1.078	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	N/A	-0.01	10 mm	1897M	N/A	1:1	back	0.656	1.042	0.684	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	N/A	0.00	10 mm	1897M	N/A	1:1	front	0.638	1.042	0.665	
1852.40	9262	UMTS 1900	RMC	24.0	23.70	N/A	-0.01	13 mm	1897M	N/A	1:1	bottom	0.779	1.072	0.835	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	N/A	0.00	13 mm	1897M	N/A	1:1	bottom	0.866	1.042	0.902	
1907.60	9538	UMTS 1900	RMC	24.0	23.77	N/A	-0.03	13 mm	1897M	N/A	1:1	bottom	0.895	1.054	0.943	A54
1880.00	9400	UMTS 1900	RMC	20.0	19.93	N/A	-0.01	10 mm	1897M	N/A	1:1	bottom	0.536	1.016	0.545	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	N/A	0.01	10 mm	1897M	N/A	1:1	right	0.180	1.042	0.188	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**									**UMPC Body** **1.6 W/kg (mW/g)** averaged over 1 gram							

Note: Blue entry represents variability measurement.

Table 11-36
LTE Band 12 UMPC Body SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	25	0.01	0	1954M	QPSK	1	25	10 mm	back	1:1	0.176	1.242	0.219	
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	25	0.00	1	1954M	QPSK	25	0	10 mm	back	1:1	0.145	1.230	0.178	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	25	0.06	0	1954M	QPSK	1	25	10 mm	front	1:1	0.134	1.242	0.166	
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	25	0.05	1	1954M	QPSK	25	0	10 mm	front	1:1	0.114	1.230	0.140	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	25	-0.20	0	1954M	QPSK	1	25	10 mm	bottom	1:1	0.094	1.242	0.117	
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	25	-0.04	1	1954M	QPSK	25	0	10 mm	bottom	1:1	0.083	1.230	0.102	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	25	0.02	0	1954M	QPSK	1	25	10 mm	right	1:1	0.196	1.242	0.243	A55
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	25	0.02	1	1954M	QPSK	25	0	10 mm	right	1:1	0.161	1.230	0.198	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-37
LTE Band 13 UMPC Body SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	11	-0.01	0	1954M	QPSK	1	0	10 mm	back	1:1	0.224	1.247	0.279	A56
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	11	-0.02	1	1954M	QPSK	25	12	10 mm	back	1:1	0.191	1.239	0.237	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	11	0.12	0	1954M	QPSK	1	0	10 mm	front	1:1	0.194	1.247	0.242	
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	11	0.08	1	1954M	QPSK	25	12	10 mm	front	1:1	0.165	1.239	0.204	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	11	-0.01	0	1954M	QPSK	1	0	10 mm	bottom	1:1	0.169	1.247	0.211	
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	11	0.00	1	1954M	QPSK	25	12	10 mm	bottom	1:1	0.141	1.239	0.175	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	11	-0.11	0	1954M	QPSK	1	0	10 mm	right	1:1	0.196	1.247	0.244	
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	11	-0.03	1	1954M	QPSK	25	12	10 mm	right	1:1	0.165	1.239	0.204	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-38
LTE Band 26 (Cell) UMPC Body SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	2	-0.15	0	1940M	QPSK	1	0	10 mm	back	1:1	0.470	1.125	0.529	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	2	-0.21	1	1940M	QPSK	36	18	10 mm	back	1:1	0.399	1.094	0.437	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	2	0.01	0	1940M	QPSK	1	0	10 mm	front	1:1	0.482	1.125	0.542	A57
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	2	-0.03	1	1940M	QPSK	36	18	10 mm	front	1:1	0.414	1.094	0.453	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	2	0.08	0	1940M	QPSK	1	0	10 mm	bottom	1:1	0.401	1.125	0.451	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	2	0.00	1	1940M	QPSK	36	18	10 mm	bottom	1:1	0.317	1.094	0.347	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	2	-0.06	0	1940M	QPSK	1	0	10 mm	right	1:1	0.394	1.125	0.443	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	2	0.03	1	1940M	QPSK	36	18	10 mm	right	1:1	0.331	1.094	0.362	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-39
LTE Band 66 (AWS) UMPC Body SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.38	0.02	0	1875M	QPSK	1	99	10 mm	back	1:1	0.635	1.153	0.732	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.65	0.03	0	1875M	QPSK	1	50	10 mm	back	1:1	0.726	1.084	0.787	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	0.04	0	1875M	QPSK	1	0	10 mm	back	1:1	0.749	1.074	0.804	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	0.01	1	1875M	QPSK	50	25	10 mm	back	1:1	0.593	1.030	0.611	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	23.0	22.84	-0.02	1	1875M	QPSK	100	0	10 mm	back	1:1	0.583	1.038	0.605	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.38	-0.01	0	1875M	QPSK	1	99	10 mm	front	1:1	0.902	1.153	1.040	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.65	-0.03	0	1875M	QPSK	1	50	10 mm	front	1:1	1.000	1.084	1.084	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	-0.05	0	1875M	QPSK	1	0	10 mm	front	1:1	1.030	1.074	1.106	A58
1720.00	132072	Low	LTE Band 66 (AWS)	20	23.0	22.45	-0.01	1	1875M	QPSK	50	50	10 mm	front	1:1	0.709	1.135	0.805	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	23.0	22.83	-0.02	1	1875M	QPSK	50	25	10 mm	front	1:1	0.810	1.040	0.842	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	-0.01	1	1875M	QPSK	50	25	10 mm	front	1:1	0.816	1.030	0.840	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	23.0	22.84	0.02	1	1875M	QPSK	100	0	10 mm	front	1:1	0.807	1.038	0.838	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.38	-0.01	0	1875M	QPSK	1	99	13 mm	bottom	1:1	0.794	1.153	0.915	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.65	0.04	0	1875M	QPSK	1	50	13 mm	bottom	1:1	0.917	1.084	0.994	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	-0.04	0	1875M	QPSK	1	0	13 mm	bottom	1:1	0.979	1.074	1.051	
1720.00	132072	Low	LTE Band 66 (AWS)	20	23.0	22.45	-0.06	1	1875M	QPSK	50	50	13 mm	bottom	1:1	0.624	1.135	0.708	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	23.0	22.83	-0.03	1	1875M	QPSK	50	25	13 mm	bottom	1:1	0.749	1.040	0.779	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	-0.03	1	1875M	QPSK	50	25	13 mm	bottom	1:1	0.795	1.030	0.819	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	23.0	22.84	-0.03	1	1875M	QPSK	100	0	13 mm	bottom	1:1	0.747	1.038	0.775	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.32	-0.02	0	1875M	QPSK	1	0	10 mm	bottom	1:1	0.668	1.042	0.696	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.36	-0.03	0	1875M	QPSK	50	0	10 mm	bottom	1:1	0.685	1.033	0.708	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	-0.03	0	1875M	QPSK	1	0	10 mm	right	1:1	0.365	1.074	0.392	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	-0.01	1	1875M	QPSK	50	25	10 mm	right	1:1	0.287	1.030	0.296	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	UMPC Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Table 11-40
LTE Band 25 (PCS) UMPC Body SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	-0.01	0	1908M	QPSK	1	99	10 mm	back	1:1	0.595	1.069	0.636	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	-0.03	1	1908M	QPSK	50	50	10 mm	back	1:1	0.477	1.057	0.504	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	-0.01	0	1908M	QPSK	1	99	10 mm	front	1:1	0.611	1.069	0.653	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	0.02	1	1908M	QPSK	50	50	10 mm	front	1:1	0.490	1.057	0.518	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.48	-0.02	0	1908M	QPSK	1	99	13 mm	bottom	1:1	0.850	1.127	0.958	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	0.04	0	1908M	QPSK	1	99	13 mm	bottom	1:1	0.864	1.069	0.924	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.0	23.68	0.00	0	1908M	QPSK	1	99	13 mm	bottom	1:1	0.935	1.076	1.006	A59
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	-0.01	1	1908M	QPSK	50	50	13 mm	bottom	1:1	0.709	1.057	0.749	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.73	0.03	1	1908M	QPSK	100	0	13 mm	bottom	1:1	0.730	1.064	0.777	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	19.43	0.00	0	1908M	QPSK	1	99	10 mm	bottom	1:1	0.674	1.140	0.768	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.0	19.58	0.00	0	1908M	QPSK	1	50	10 mm	bottom	1:1	0.743	1.102	0.819	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.65	-0.01	0	1908M	QPSK	1	99	10 mm	bottom	1:1	0.752	1.084	0.815	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.80	-0.02	0	1908M	QPSK	50	50	10 mm	bottom	1:1	0.758	1.047	0.794	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.56	-0.04	0	1908M	QPSK	100	0	10 mm	bottom	1:1	0.782	1.107	0.866	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	0.06	0	1908M	QPSK	1	99	10 mm	right	1:1	0.185	1.069	0.198	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	0.06	1	1908M	QPSK	50	50	10 mm	right	1:1	0.144	1.057	0.152	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.0	23.68	-0.06	0	1908M	QPSK	1	99	13 mm	bottom	1:1	0.884	1.076	0.951	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram			

Note: Blue entry represents variability measurement.

Table 11-41
LTE Band 41 UMPC Body SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	0.03	0	1874M	QPSK	1	0	10 mm	back	1:1.58	0.497	1.148	0.571	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	-0.02	1	1874M	QPSK	50	0	10 mm	back	1:1.58	0.403	1.112	0.448	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	-0.03	0	1874M	QPSK	1	0	10 mm	front	1:1.58	0.514	1.148	0.590	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	-0.02	1	1874M	QPSK	50	0	10 mm	front	1:1.58	0.422	1.112	0.469	
2506.00	39750	Low	LTE Band 41	20	24.0	23.38	-0.11	0	1874M	QPSK	1	0	13 mm	bottom	1:1.58	0.717	1.153	0.827	
2549.50	40185	Low-Mid	LTE Band 41	20	24.0	23.22	-0.07	0	1874M	QPSK	1	50	13 mm	bottom	1:1.58	0.668	1.197	0.800	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	-0.06	0	1874M	QPSK	1	0	13 mm	bottom	1:1.58	0.673	1.148	0.773	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.26	0.02	0	1874M	QPSK	1	0	13 mm	bottom	1:1.58	0.681	1.186	0.808	
2680.00	41490	High	LTE Band 41	20	24.0	23.39	-0.19	0	1874M	QPSK	1	99	13 mm	bottom	1:1.58	0.766	1.151	0.882	A60
2506.00	39750	Low	LTE Band 41	20	23.0	22.50	-0.14	1	1874M	QPSK	50	25	13 mm	bottom	1:1.58	0.567	1.122	0.636	
2549.50	40185	Low-Mid	LTE Band 41	20	23.0	22.33	-0.06	1	1874M	QPSK	50	0	13 mm	bottom	1:1.58	0.543	1.167	0.634	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	-0.08	1	1874M	QPSK	50	0	13 mm	bottom	1:1.58	0.545	1.112	0.606	
2636.50	41055	Mid-High	LTE Band 41	20	23.0	22.44	-0.10	1	1874M	QPSK	50	0	13 mm	bottom	1:1.58	0.549	1.138	0.625	
2680.00	41490	High	LTE Band 41	20	23.0	22.53	-0.14	1	1874M	QPSK	50	25	13 mm	bottom	1:1.58	0.594	1.114	0.662	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.49	-0.07	1	1874M	QPSK	100	0	13 mm	bottom	1:1.58	0.545	1.125	0.613	
2506.00	39750	Low	LTE Band 41	20	21.0	20.72	-0.06	0	1874M	QPSK	1	50	10 mm	bottom	1:1.58	0.581	1.067	0.620	
2549.50	40185	Low-Mid	LTE Band 41	20	21.0	20.67	-0.12	0	1874M	QPSK	1	0	10 mm	bottom	1:1.58	0.534	1.079	0.576	
2593.00	40620	Mid	LTE Band 41	20	21.0	20.48	-0.08	0	1874M	QPSK	1	50	10 mm	bottom	1:1.58	0.525	1.127	0.592	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.77	-0.14	0	1874M	QPSK	1	0	10 mm	bottom	1:1.58	0.551	1.054	0.581	
2680.00	41490	High	LTE Band 41	20	21.0	20.76	-0.10	0	1874M	QPSK	1	99	10 mm	bottom	1:1.58	0.593	1.057	0.627	
2506.00	39750	Low	LTE Band 41	20	21.0	20.71	-0.07	0	1874M	QPSK	50	25	10 mm	bottom	1:1.58	0.569	1.069	0.608	
2549.50	40185	Low-Mid	LTE Band 41	20	21.0	20.63	-0.08	0	1874M	QPSK	50	25	10 mm	bottom	1:1.58	0.533	1.089	0.580	
2593.00	40620	Mid	LTE Band 41	20	21.0	20.68	-0.06	0	1874M	QPSK	50	25	10 mm	bottom	1:1.58	0.550	1.076	0.592	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.80	-0.07	0	1874M	QPSK	50	25	10 mm	bottom	1:1.58	0.555	1.047	0.581	
2680.00	41490	High	LTE Band 41	20	21.0	20.76	-0.06	0	1874M	QPSK	50	0	10 mm	bottom	1:1.58	0.600	1.057	0.634	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.66	-0.09	0	1874M	QPSK	100	0	10 mm	bottom	1:1.58	0.567	1.081	0.613	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	0.05	0	1874M	QPSK	1	0	10 mm	right	1:1.58	0.360	1.148	0.413	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	-0.02	1	1874M	QPSK	50	0	10 mm	right	1:1.58	0.296	1.112	0.329	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	**UMPC Body**
Spatial Peak	**1.6 W/kg (mW/g)**
Uncontrolled Exposure/General Population	averaged over 1 gram

Table 11-42
WLAN UMPC Body SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2412	1	802.11b	DSSS	22	20.0	19.97	0.14	10 mm	1	1921M	1	back	99.9	0.307	-	1.007	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.97	0.11	10 mm	1	1921M	1	front	99.9	0.529	0.316	1.007	1.001	**0.319**	A61
2412	1	802.11b	DSSS	22	20.0	19.97	0.03	10 mm	1	1921M	1	top	99.9	0.484	-	1.007	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.97	0.14	10 mm	1	1921M	1	right	99.9	0.350	-	1.007	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.98	0.00	10 mm	2	1921M	1	back	99.9	0.184	-	1.005	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.98	0.19	10 mm	2	1921M	1	front	99.9	0.094	0.058	1.005	1.001	0.058	
2412	1	802.11b	DSSS	22	20.0	19.98	0.11	10 mm	2	1921M	1	top	99.9	0.204	0.137	1.005	1.001	0.138	
5320	64	802.11a	OFDM	20	18.0	17.91	-0.04	10 mm	1	1968M	6	back	98.8	0.874	0.383	1.021	1.012	0.396	
5320	64	802.11a	OFDM	20	18.0	17.91	-0.11	10 mm	1	1968M	6	front	98.8	0.516	-	1.021	1.012	-	
5320	64	802.11a	OFDM	20	18.0	17.91	-0.11	10 mm	1	1968M	6	top	98.8	0.341	-	1.021	1.012	-	
5320	64	802.11a	OFDM	20	18.0	17.91	-0.12	10 mm	1	1968M	6	right	98.8	0.053	-	1.021	1.012	-	
5280	56	802.11a	OFDM	20	18.0	17.99	-0.16	10 mm	2	1968M	6	back	98.7	0.254	-	1.002	1.013	-	
5280	56	802.11a	OFDM	20	18.0	17.99	0.17	10 mm	2	1968M	6	front	98.7	0.194	0.064	1.002	1.013	0.065	
5280	56	802.11a	OFDM	20	18.0	17.99	-0.12	10 mm	2	1968M	6	top	98.7	0.306	0.124	1.002	1.013	0.126	
5500	100	802.11a	OFDM	20	18.0	17.94	-0.17	10 mm	1	1968M	6	back	98.8	1.327	0.559	1.014	1.012	**0.574**	
5500	100	802.11a	OFDM	20	18.0	17.94	-0.19	10 mm	1	1968M	6	front	98.8	0.825	0.385	1.014	1.012	0.395	
5500	100	802.11a	OFDM	20	18.0	17.94	-0.12	10 mm	1	1968M	6	top	98.8	0.455	-	1.014	1.012	-	
5500	100	802.11a	OFDM	20	18.0	17.94	-0.15	10 mm	1	1968M	6	right	98.8	0.159	-	1.014	1.012	-	
5720	144	802.11a	OFDM	20	18.0	17.98	-0.06	10 mm	2	1968M	6	back	98.7	0.431	0.169	1.005	1.013	0.172	
5720	144	802.11a	OFDM	20	18.0	17.98	-0.16	10 mm	2	1968M	6	front	98.7	0.411	0.140	1.005	1.013	0.143	
5720	144	802.11a	OFDM	20	18.0	17.98	0.18	10 mm	2	1968M	6	top	98.7	1.026	0.429	1.005	1.013	0.437	
5785	157	802.11a	OFDM	20	18.0	17.97	0.00	10 mm	1	1968M	6	back	98.8	0.655	0.244	1.007	1.012	0.249	
5785	157	802.11a	OFDM	20	18.0	17.97	-0.09	10 mm	1	1968M	6	front	98.8	1.020	0.422	1.007	1.012	0.430	
5785	157	802.11a	OFDM	20	18.0	17.97	-0.12	10 mm	1	1968M	6	top	98.8	0.366	-	1.007	1.012	-	
5785	157	802.11a	OFDM	20	18.0	17.97	0.14	10 mm	1	1968M	6	right	98.8	0.204	-	1.007	1.012	-	
5785	157	802.11a	OFDM	20	18.0	17.86	-0.11	10 mm	2	1968M	6	back	98.7	0.470	0.186	1.033	1.013	0.195	
5785	157	802.11a	OFDM	20	18.0	17.86	0.03	10 mm	2	1968M	6	front	98.7	0.428	0.140	1.033	1.013	0.147	
5785	157	802.11a	OFDM	20	18.0	17.86	0.09	10 mm	2	1968M	6	top	98.7	1.039	0.431	1.033	1.013	0.451	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	**UMPC Body**
Spatial Peak	**1.6 W/kg (mW/g)**
Uncontrolled Exposure/General Population	averaged over 1 gram

Table 11-43
2.4 GHz WLAN MIMO UMPC Body SAR with 2.4 GHz and 5 GHz WLAN SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2457	10	802.11n	OFDM	20	17.0	16.76	17.0	16.62	0.16	10 mm	MIMO	1921M	13	back	98.7	0.183	-	1.091	1.013	-	
2457	10	802.11n	OFDM	20	17.0	16.76	17.0	16.62	0.18	10 mm	MIMO	1921M	13	front	98.7	0.175	-	1.091	1.013	-	
2457	10	802.11n	OFDM	20	17.0	16.76	17.0	16.62	-0.08	10 mm	MIMO	1921M	13	top	98.7	0.245	0.172	1.091	1.013	0.190	
2457	10	802.11n	OFDM	20	17.0	16.76	17.0	16.62	0.15	10 mm	MIMO	1921M	13	right	98.7	0.015	-	1.091	1.013	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram					

Note: DTS MIMO was additionally evaluated at the maximum allowed output power during operations with Simultaneous 2.4 GHz and 5 GHz WLAN. 5 GHz WIFI was not transmitting during the above evaluations.

Table 11-44
NII WLAN MIMO UMPC Body SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	0.01	10 mm	MIMO	1968M	13	back	98.6	1.004	0.511	1.023	1.014	0.530	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	-0.03	10 mm	MIMO	1968M	13	front	98.6	0.692	0.328	1.023	1.014	0.340	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	0.13	10 mm	MIMO	1968M	13	top	98.6	0.515	-	1.023	1.014	-	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	-0.13	10 mm	MIMO	1968M	13	right	98.6	0.136	-	1.023	1.014	-	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	-0.07	10 mm	MIMO	1968M	13	back	98.6	1.287	0.682	1.033	1.014	0.714	
5620	124	802.11n	OFDM	20	18.0	17.72	18.0	17.71	0.13	10 mm	MIMO	1968M	13	back	98.6	1.783	0.765	1.069	1.014	0.829	A62
5720	144	802.11n	OFDM	20	18.0	17.82	18.0	17.96	0.05	10 mm	MIMO	1968M	13	back	98.6	1.063	0.456	1.042	1.014	0.482	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	0.02	10 mm	MIMO	1968M	13	front	98.6	0.982	0.419	1.033	1.014	0.439	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	-0.18	10 mm	MIMO	1968M	13	top	98.6	0.709	-	1.033	1.014	-	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	-0.13	10 mm	MIMO	1968M	13	right	98.6	0.222	-	1.033	1.014	-	
5785	157	802.11n	OFDM	20	18.0	17.91	18.0	17.84	-0.03	10 mm	MIMO	1968M	13	back	98.6	1.003	-	1.038	1.014	-	
5785	157	802.11n	OFDM	20	18.0	17.91	18.0	17.84	-0.12	10 mm	MIMO	1968M	13	front	98.6	1.194	0.522	1.038	1.014	0.549	
5785	157	802.11n	OFDM	20	18.0	17.91	18.0	17.84	-0.12	10 mm	MIMO	1968M	13	top	98.6	1.353	0.538	1.038	1.014	0.566	
5785	157	802.11n	OFDM	20	18.0	17.91	18.0	17.84	-0.17	10 mm	MIMO	1968M	13	right	98.6	0.355	-	1.038	1.014	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram					

Note: To achieve the 21.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18.0 dBm.

Table 11-45
5 GHz WLAN MIMO UMPC Body SAR with 2.4 GHz and 5 GHz WLAN SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	-0.03	10 mm	MIMO	1968M	27	back	97.3	0.420	0.196	1.030	1.028	0.208	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	0.05	10 mm	MIMO	1968M	27	front	97.3	0.246	0.109	1.030	1.028	0.115	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	0.13	10 mm	MIMO	1968M	27	top	97.3	0.195	-	1.030	1.028	-	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	0.00	10 mm	MIMO	1968M	27	right	97.3	0.040	-	1.030	1.028	-	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	-0.07	10 mm	MIMO	1968M	58.5	back	90.7	0.411	0.206	1.318	1.103	0.299	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	0.18	10 mm	MIMO	1968M	58.5	front	90.7	0.318	0.132	1.318	1.103	0.192	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	-0.16	10 mm	MIMO	1968M	58.5	top	90.7	0.196	-	1.318	1.103	-	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	0.00	10 mm	MIMO	1968M	58.5	right	90.7	0.065	-	1.318	1.103	-	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	0.17	10 mm	MIMO	1968M	58.5	back	90.7	0.286	-	1.387	1.103	-	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	-0.06	10 mm	MIMO	1968M	58.5	front	90.7	0.314	0.116	1.387	1.103	0.177	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	-0.08	10 mm	MIMO	1968M	58.5	top	90.7	0.342	0.118	1.387	1.103	0.181	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	0.00	10 mm	MIMO	1968M	58.5	right	90.7	0.086	-	1.387	1.103	-	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	UMPC Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Note: NII MIMO was additionally evaluated at the maximum allowed output power during operations with Simultaneous 2.4 GHz and 5 GHz WLAN. 2.4 GHz WIFI was not transmitting during the above evaluations.

Table 11-46
DSS UMPC Body SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)			(W/kg)	
2402	0	Bluetooth	FHSS	16.5	16.18	0.16	10 mm	1921M	1	back	77.1	0.049	1.076	1.297	0.068	
2402	0	Bluetooth	FHSS	16.5	16.18	0.08	10 mm	1921M	1	front	77.1	0.089	1.076	1.297	**0.124**	A63
2402	0	Bluetooth	FHSS	16.5	16.18	0.16	10 mm	1921M	1	top	77.1	0.081	1.076	1.297	0.113	
2402	0	Bluetooth	FHSS	16.5	16.18	0.01	10 mm	1921M	1	right	77.1	0.064	1.076	1.297	0.089	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	UMPC Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

11.6 Standalone UMPC Extremity SAR

Table 11-47
GPRS/UMTS UMPC Extremity SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Spacing	Device Serial Number	# of GPRS Slots	Duty Cycle	Side	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
836.60	190	GSM 850	GPRS	30.5	29.89	N/A	0.00	0 mm	1954M	3	1:2.76	back	1.210	1.151	1.393	A64
836.60	190	GSM 850	GPRS	30.5	29.89	N/A	-0.04	0 mm	1954M	3	1:2.76	front	1.100	1.151	1.266	
836.60	190	GSM 850	GPRS	30.5	29.89	N/A	-0.12	0 mm	1954M	3	1:2.76	bottom	0.573	1.151	0.660	
836.60	190	GSM 850	GPRS	30.5	29.89	N/A	-0.11	0 mm	1954M	3	1:2.76	right	0.408	1.151	0.470	
1880.00	661	GSM 1900	GPRS	27.5	26.89	N/A	-0.18	8 mm	1908M	3	1:2.76	back	0.288	1.151	0.331	
1880.00	661	GSM 1900	GPRS	27.5	26.89	N/A	-0.17	8 mm	1908M	3	1:2.76	front	0.293	1.151	0.337	
1880.00	661	GSM 1900	GPRS	27.5	26.89	N/A	-0.04	13 mm	1908M	3	1:2.76	bottom	0.286	1.151	0.329	
1880.00	661	GSM 1900	GPRS	27.5	26.89	N/A	-0.03	0 mm	1908M	3	1:2.76	right	0.519	1.151	0.597	
1880.00	661	GSM 1900	GPRS	24.5	23.96	N/A	0.01	0 mm	1908M	3	1:2.76	back	1.430	1.132	1.619	
1880.00	661	GSM 1900	GPRS	24.5	23.96	N/A	0.02	0 mm	1908M	3	1:2.76	front	1.450	1.132	1.641	
1850.20	512	GSM 1900	GPRS	24.5	23.68	N/A	-0.15	0 mm	1908M	3	1:2.76	bottom	2.600	1.208	**3.141**	A65
1880.00	661	GSM 1900	GPRS	24.5	23.96	N/A	-0.12	0 mm	1908M	3	1:2.76	bottom	2.530	1.132	2.864	
1909.80	810	GSM 1900	GPRS	24.5	23.56	N/A	-0.10	0 mm	1908M	3	1:2.76	bottom	1.910	1.242	2.372	
836.60	4183	UMTS 850	RMC	25.0	24.74	16	-0.13	0 mm	1940M	N/A	1:1	back	1.310	1.062	1.391	
826.40	4132	UMTS 850	RMC	25.0	24.85	16	-0.03	0 mm	1940M	N/A	1:1	front	1.710	1.035	1.770	
836.60	4183	UMTS 850	RMC	25.0	24.74	16	0.03	0 mm	1940M	N/A	1:1	front	1.770	1.062	1.880	A66
846.60	4233	UMTS 850	RMC	25.0	24.51	16	0.03	0 mm	1940M	N/A	1:1	front	1.210	1.119	1.354	
836.60	4183	UMTS 850	RMC	25.0	24.74	16	-0.16	0 mm	1940M	N/A	1:1	bottom	0.575	1.062	0.611	
836.60	4183	UMTS 850	RMC	25.0	24.74	16	-0.08	0 mm	1940M	N/A	1:1	right	0.684	1.062	0.726	
1732.40	1412	UMTS 1750	RMC	24.0	23.82	N/A	-0.01	8 mm	1875M	N/A	1:1	back	0.658	1.042	0.686	
1732.40	1412	UMTS 1750	RMC	24.0	23.82	N/A	0.00	8 mm	1875M	N/A	1:1	front	0.598	1.042	0.623	
1732.40	1412	UMTS 1750	RMC	24.0	23.82	N/A	-0.02	13 mm	1875M	N/A	1:1	bottom	0.431	1.042	0.449	
1732.40	1412	UMTS 1750	RMC	24.0	23.82	N/A	0.03	0 mm	1875M	N/A	1:1	right	1.060	1.042	1.105	
1732.40	1412	UMTS 1750	RMC	20.0	19.44	N/A	-0.14	0 mm	1875M	N/A	1:1	back	1.070	1.138	1.218	
1732.40	1412	UMTS 1750	RMC	20.0	19.44	N/A	0.00	0 mm	1875M	N/A	1:1	front	1.390	1.138	1.582	
1712.40	1312	UMTS 1750	RMC	20.0	19.38	N/A	0.12	0 mm	1875M	N/A	1:1	bottom	1.970	1.153	2.271	
1732.40	1412	UMTS 1750	RMC	20.0	19.44	N/A	0.11	0 mm	1875M	N/A	1:1	bottom	2.100	1.138	2.390	
1752.60	1513	UMTS 1750	RMC	20.0	19.56	N/A	0.10	0 mm	1875M	N/A	1:1	bottom	2.410	1.107	2.668	A67
1880.00	9400	UMTS 1900	RMC	24.0	23.82	N/A	0.00	8 mm	1897M	N/A	1:1	back	0.460	1.042	0.479	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	N/A	0.01	8 mm	1897M	N/A	1:1	front	0.404	1.042	0.421	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	N/A	0.00	13 mm	1897M	N/A	1:1	bottom	0.469	1.042	0.489	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	N/A	0.00	0 mm	1897M	N/A	1:1	right	0.768	1.042	0.800	
1880.00	9400	UMTS 1900	RMC	20.0	19.93	N/A	-0.01	0 mm	1897M	N/A	1:1	back	1.150	1.016	1.168	
1880.00	9400	UMTS 1900	RMC	20.0	19.93	N/A	-0.01	0 mm	1897M	N/A	1:1	front	1.240	1.016	1.260	
1852.40	9262	UMTS 1900	RMC	20.0	19.77	N/A	0.03	0 mm	1897M	N/A	1:1	bottom	2.470	1.054	2.603	
1880.00	9400	UMTS 1900	RMC	20.0	19.93	N/A	0.03	0 mm	1897M	N/A	1:1	bottom	2.550	1.016	2.591	
1907.60	9538	UMTS 1900	RMC	20.0	20.00	N/A	0.00	0 mm	1897M	N/A	1:1	bottom	2.560	1.000	2.560	A68
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**													**UMPC Extremity** **4.0 W/kg (mW/g)** averaged over 10 grams			

Table 11-48
LTE Band 12 UMPC Extremity SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	25	0.16	0	1954M	QPSK	1	25	0 mm	back	1:1	0.629	1.242	0.781	
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	25	0.01	1	1954M	QPSK	25	0	0 mm	back	1:1	0.522	1.230	0.642	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	25	0.07	0	1954M	QPSK	1	25	0 mm	front	1:1	0.980	1.242	1.217	A69
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	25	-0.03	1	1954M	QPSK	25	0	0 mm	front	1:1	0.797	1.230	0.980	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	25	-0.12	0	1954M	QPSK	1	25	0 mm	bottom	1:1	0.344	1.242	0.427	
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	25	-0.20	1	1954M	QPSK	25	0	0 mm	bottom	1:1	0.302	1.230	0.371	
707.50	23095	Mid	LTE Band 12	10	25.5	24.56	25	-0.12	0	1954M	QPSK	1	25	0 mm	right	1:1	0.826	1.242	1.026	
707.50	23095	Mid	LTE Band 12	10	24.5	23.60	25	-0.21	1	1954M	QPSK	25	0	0 mm	right	1:1	0.684	1.230	0.841	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams			

Table 11-49
LTE Band 13 UMPC Extremity SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	11	0.01	0	1954M	QPSK	1	0	0 mm	back	1:1	0.714	1.247	0.890	
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	11	0.06	1	1954M	QPSK	25	12	0 mm	back	1:1	0.607	1.239	0.752	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	11	-0.11	0	1954M	QPSK	1	0	0 mm	front	1:1	1.270	1.247	1.584	A70
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	11	-0.01	1	1954M	QPSK	25	12	0 mm	front	1:1	1.050	1.239	1.301	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	11	-0.21	0	1954M	QPSK	1	0	0 mm	bottom	1:1	0.415	1.247	0.518	
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	11	-0.18	1	1954M	QPSK	25	12	0 mm	bottom	1:1	0.347	1.239	0.430	
782.00	23230	Mid	LTE Band 13	10	25.5	24.54	11	-0.16	0	1954M	QPSK	1	0	0 mm	right	1:1	0.500	1.247	0.624	
782.00	23230	Mid	LTE Band 13	10	24.5	23.57	11	-0.19	1	1954M	QPSK	25	12	0 mm	right	1:1	0.421	1.239	0.522	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams			

Table 11-50
LTE Band 26 (Cell) UMPC Extremity SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	2	-0.13	0	1940M	QPSK	1	0	0 mm	back	1:1	1.120	1.125	1.260	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	2	-0.13	1	1940M	QPSK	36	18	0 mm	back	1:1	0.910	1.094	0.996	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	2	-0.04	0	1940M	QPSK	1	0	0 mm	front	1:1	1.690	1.125	1.901	A71
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	2	0.00	1	1940M	QPSK	36	18	0 mm	front	1:1	1.420	1.094	1.553	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	2	-0.17	0	1940M	QPSK	1	0	0 mm	bottom	1:1	0.616	1.125	0.693	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	2	-0.18	1	1940M	QPSK	36	18	0 mm	bottom	1:1	0.497	1.094	0.544	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.0	24.49	2	-0.12	0	1940M	QPSK	1	0	0 mm	right	1:1	0.657	1.125	0.739	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.0	23.61	2	-0.15	1	1940M	QPSK	36	18	0 mm	right	1:1	0.562	1.094	0.615	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	UMPC Extremity
Spatial Peak	4.0 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 10 grams

Table 11-51
LTE Band 66 (AWS) UMPC Extremity SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	0.05	0	1875M	QPSK	1	0	8 mm	back	1:1	0.657	1.074	0.706	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	0.02	1	1875M	QPSK	50	25	8 mm	back	1:1	0.518	1.030	0.534	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	-0.01	0	1875M	QPSK	1	0	8 mm	front	1:1	0.764	1.074	0.821	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	0.00	1	1875M	QPSK	50	25	8 mm	front	1:1	0.615	1.030	0.633	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	-0.04	0	1875M	QPSK	1	0	13 mm	bottom	1:1	0.511	1.074	0.549	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	-0.03	1	1875M	QPSK	50	25	13 mm	bottom	1:1	0.415	1.030	0.427	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.69	0.00	0	1875M	QPSK	1	0	0 mm	right	1:1	1.140	1.074	1.224	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.87	0.01	1	1875M	QPSK	50	25	0 mm	right	1:1	0.943	1.030	0.971	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.32	-0.08	0	1875M	QPSK	1	0	0 mm	back	1:1	1.400	1.042	1.459	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.36	-0.07	0	1875M	QPSK	50	0	0 mm	back	1:1	1.420	1.033	1.467	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.32	-0.01	0	1875M	QPSK	1	0	0 mm	front	1:1	1.380	1.042	1.438	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.36	-0.02	0	1875M	QPSK	50	0	0 mm	front	1:1	1.390	1.033	1.436	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	18.91	-0.18	0	1875M	QPSK	1	99	0 mm	bottom	1:1	2.430	1.146	2.785	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.5	19.05	-0.19	0	1875M	QPSK	1	50	0 mm	bottom	1:1	2.680	1.109	2.972	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.32	-0.01	0	1875M	QPSK	1	0	0 mm	bottom	1:1	2.750	1.042	2.866	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	19.00	-0.12	0	1875M	QPSK	50	0	0 mm	bottom	1:1	2.470	1.122	2.771	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.5	19.28	-0.20	0	1875M	QPSK	50	25	0 mm	bottom	1:1	2.790	1.052	2.935	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.36	-0.03	0	1875M	QPSK	50	0	0 mm	bottom	1:1	2.870	1.033	2.965	A72
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.5	19.31	-0.19	0	1875M	QPSK	100	0	0 mm	bottom	1:1	2.770	1.045	2.895	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	19.36	-0.05	0	1875M	QPSK	50	0	0 mm	bottom	1:1	2.830	1.033	2.923	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	UMPC Extremity
Spatial Peak	4.0 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 10 grams

Note: Blue entry represents variability measurement.

Table 11-52
LTE Band 25 (PCS) UMPC Extremity SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	0.00	0	1908M	QPSK	1	99	8 mm	back	1:1	0.430	1.069	0.460	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	-0.02	1	1908M	QPSK	50	50	8 mm	back	1:1	0.350	1.057	0.370	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	0.01	0	1908M	QPSK	1	99	8 mm	front	1:1	0.458	1.069	0.490	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	0.00	1	1908M	QPSK	50	50	8 mm	front	1:1	0.368	1.057	0.389	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	0.04	0	1908M	QPSK	1	99	13 mm	bottom	1:1	0.466	1.069	0.498	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	-0.01	1	1908M	QPSK	50	50	13 mm	bottom	1:1	0.382	1.057	0.404	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.71	-0.03	0	1908M	QPSK	1	99	0 mm	right	1:1	0.771	1.069	0.824	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.0	22.76	0.04	1	1908M	QPSK	50	50	0 mm	right	1:1	0.573	1.057	0.606	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.65	-0.04	0	1940M	QPSK	1	99	0 mm	back	1:1	1.740	1.084	1.886	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.80	0.02	0	1940M	QPSK	50	50	0 mm	back	1:1	1.770	1.047	1.853	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.65	-0.03	0	1940M	QPSK	1	99	0 mm	front	1:1	1.550	1.084	1.680	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.80	-0.02	0	1940M	QPSK	50	50	0 mm	front	1:1	1.580	1.047	1.654	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	19.43	-0.11	0	1940M	QPSK	1	99	0 mm	bottom	1:1	2.660	1.140	3.032	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.0	19.58	-0.12	0	1940M	QPSK	1	50	0 mm	bottom	1:1	2.740	1.102	3.019	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.65	-0.19	0	1940M	QPSK	1	99	0 mm	bottom	1:1	2.660	1.084	2.883	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	19.50	-0.18	0	1940M	QPSK	50	50	0 mm	bottom	1:1	2.770	1.122	3.108	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.0	19.72	-0.19	0	1940M	QPSK	50	50	0 mm	bottom	1:1	2.850	1.067	3.041	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.80	-0.15	0	1940M	QPSK	50	50	0 mm	bottom	1:1	2.730	1.047	2.858	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	19.56	-0.19	0	1940M	QPSK	100	0	0 mm	bottom	1:1	2.730	1.107	3.022	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.0	19.72	0.02	0	1940M	QPSK	50	50	0 mm	bottom	1:1	2.860	1.067	3.052	A73
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams			

Note: Blue entry represents variability measurement.

Table 11-53
LTE Band 41 UMPC Extremity SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	0.06	0	1874M	QPSK	1	0	8 mm	back	1:1.58	0.309	1.148	0.355	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	0.00	1	1874M	QPSK	50	0	8 mm	back	1:1.58	0.249	1.112	0.277	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	0.03	0	1874M	QPSK	1	0	8 mm	front	1:1.58	0.304	1.148	0.349	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	0.01	1	1874M	QPSK	50	0	8 mm	front	1:1.58	0.249	1.112	0.277	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	-0.06	0	1874M	QPSK	1	0	13 mm	bottom	1:1.58	0.318	1.148	0.365	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	-0.08	1	1874M	QPSK	50	0	13 mm	bottom	1:1.58	0.256	1.112	0.285	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.40	0.00	0	1874M	QPSK	1	0	0 mm	right	1:1.58	0.627	1.148	0.720	
2593.00	40620	Mid	LTE Band 41	20	23.0	22.54	-0.02	1	1874M	QPSK	50	0	0 mm	right	1:1.58	0.504	1.112	0.560	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.77	-0.03	0	1940M	QPSK	1	0	0 mm	back	1:1.58	0.747	1.054	0.787	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.80	0.00	0	1940M	QPSK	50	25	0 mm	back	1:1.58	0.757	1.047	0.793	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.77	-0.05	0	1940M	QPSK	1	0	0 mm	front	1:1.58	1.150	1.054	1.212	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.80	0.04	0	1940M	QPSK	50	25	0 mm	front	1:1.58	1.160	1.047	1.215	
2506.00	39750	Low	LTE Band 41	20	21.0	20.72	0.01	0	1940M	QPSK	1	50	0 mm	bottom	1:1.58	2.120	1.067	2.262	
2549.50	40185	Low-Mid	LTE Band 41	20	21.0	20.67	0.00	0	1940M	QPSK	1	0	0 mm	bottom	1:1.58	2.070	1.079	2.234	
2593.00	40620	Mid	LTE Band 41	20	21.0	20.48	0.02	0	1940M	QPSK	1	50	0 mm	bottom	1:1.58	2.080	1.127	2.344	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.77	-0.03	0	1940M	QPSK	1	0	0 mm	bottom	1:1.58	2.210	1.054	2.329	
2680.00	41490	High	LTE Band 41	20	21.0	20.76	0.01	0	1940M	QPSK	1	99	0 mm	bottom	1:1.58	2.290	1.057	2.421	
2506.00	39750	Low	LTE Band 41	20	21.0	20.71	0.01	0	1940M	QPSK	50	25	0 mm	bottom	1:1.58	2.240	1.069	2.395	
2549.50	40185	Low-Mid	LTE Band 41	20	21.0	20.63	0.04	0	1940M	QPSK	50	25	0 mm	bottom	1:1.58	2.190	1.089	2.385	
2593.00	40620	Mid	LTE Band 41	20	21.0	20.68	0.03	0	1940M	QPSK	50	25	0 mm	bottom	1:1.58	2.210	1.076	2.378	
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.80	0.01	0	1940M	QPSK	50	25	0 mm	bottom	1:1.58	2.280	1.047	2.387	
2680.00	41490	High	LTE Band 41	20	21.0	20.76	0.04	0	1940M	QPSK	50	0	0 mm	bottom	1:1.58	2.320	1.057	2.452	A74
2636.50	41055	Mid-High	LTE Band 41	20	21.0	20.66	0.05	0	1940M	QPSK	100	0	0 mm	bottom	1:1.58	2.260	1.081	2.443	
2680.00	41490	High	LTE Band 41	20	21.0	20.76	0.00	0	1940M	QPSK	50	0	0 mm	bottom	1:1.58	2.280	1.057	2.410	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams			

Note: Blue entry represents variability measurement.

Table 11-54
WLAN UMPC Extremity SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2412	1	802.11b	DSSS	22	20.0	19.97	0.20	0 mm	1	1921M	1	back	99.9	2.721	0.713	1.007	1.001	0.719	
2412	1	802.11b	DSSS	22	20.0	19.97	0.15	0 mm	1	1921M	1	front	99.9	11.205	2.000	1.007	1.001	2.016	
2437	6	802.11b	DSSS	22	20.0	19.92	0.12	0 mm	1	1921M	1	front	99.9	11.858	2.480	1.019	1.001	2.530	A75
2462	11	802.11b	DSSS	22	20.0	19.72	0.19	0 mm	1	1921M	1	front	99.9	12.764	2.420	1.067	1.001	2.585	
2412	1	802.11b	DSSS	22	20.0	19.97	0.11	0 mm	1	1921M	1	top	99.9	9.190	1.700	1.007	1.001	1.714	
2412	1	802.11b	DSSS	22	20.0	19.97	0.05	0 mm	1	1921M	1	right	99.9	3.580	-	1.007	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.98	0.01	0 mm	2	1921M	1	back	99.9	3.585	-	1.005	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.98	0.00	0 mm	2	1921M	1	front	99.9	1.668	-	1.005	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.98	0.14	0 mm	2	1921M	1	top	99.9	4.483	0.930	1.005	1.001	0.936	
2437	6	802.11b	DSSS	22	20.0	19.92	0.12	0 mm	1	1921M	1	front	99.9	11.858	2.440	1.019	1.001	2.489	
5320	64	802.11a	OFDM	20	18.0	17.91	-0.20	0 mm	1	1968M	6	back	98.8	4.286	0.668	1.021	1.012	0.690	
5320	64	802.11a	OFDM	20	18.0	17.91	-0.05	0 mm	1	1968M	6	front	98.8	9.491	0.891	1.021	1.012	0.921	
5320	64	802.11a	OFDM	20	18.0	17.91	-0.14	0 mm	1	1968M	6	top	98.8	2.360	-	1.021	1.012	-	
5320	64	802.11a	OFDM	20	18.0	17.91	0.12	0 mm	1	1968M	6	right	98.8	0.360	-	1.021	1.012	-	
5280	56	802.11a	OFDM	20	18.0	17.99	0.19	0 mm	2	1968M	6	back	98.7	5.729	-	1.002	1.013	-	
5280	56	802.11a	OFDM	20	18.0	17.99	-0.11	0 mm	2	1968M	6	front	98.7	2.710	-	1.002	1.013	-	
5280	56	802.11a	OFDM	20	18.0	17.99	-0.14	0 mm	2	1968M	6	top	98.7	6.458	0.578	1.002	1.013	0.587	
5500	100	802.11a	OFDM	20	18.0	17.94	0.07	0 mm	1	1968M	6	back	98.8	8.315	0.932	1.014	1.012	0.956	
5500	100	802.11a	OFDM	20	18.0	17.94	0.11	0 mm	1	1968M	6	front	98.8	12.573	1.120	1.014	1.012	1.149	
5500	100	802.11a	OFDM	20	18.0	17.94	-0.15	0 mm	1	1968M	6	top	98.8	3.617	-	1.014	1.012	-	
5500	100	802.11a	OFDM	20	18.0	17.94	-0.15	0 mm	1	1968M	6	right	98.8	1.099	-	1.014	1.012	-	
5720	144	802.11a	OFDM	20	18.0	17.98	-0.15	0 mm	2	1968M	6	back	98.7	3.458	-	1.005	1.013	-	
5720	144	802.11a	OFDM	20	18.0	17.98	-0.12	0 mm	2	1968M	6	front	98.7	4.496	0.528	1.005	1.013	0.538	
5720	144	802.11a	OFDM	20	18.0	17.98	0.15	0 mm	2	1968M	6	top	98.7	16.514	1.250	1.005	1.013	1.273	
5785	157	802.11a	OFDM	20	18.0	17.97	-0.11	0 mm	1	1968M	6	back	98.8	4.717	0.757	1.007	1.012	0.771	
5785	157	802.11a	OFDM	20	18.0	17.97	-0.01	0 mm	1	1968M	6	front	98.8	11.941	0.982	1.007	1.012	1.001	
5785	157	802.11a	OFDM	20	18.0	17.97	0.08	0 mm	1	1968M	6	top	98.8	2.368	-	1.007	1.012	-	
5785	157	802.11a	OFDM	20	18.0	17.97	0.17	0 mm	1	1968M	6	right	98.8	1.295	-	1.007	1.012	-	
5785	157	802.11a	OFDM	20	18.0	17.86	-0.11	0 mm	2	1968M	6	back	98.7	14.446	0.776	1.033	1.013	0.812	
5785	157	802.11a	OFDM	20	18.0	17.86	-0.19	0 mm	2	1968M	6	front	98.7	6.192	-	1.033	1.013	-	
5785	157	802.11a	OFDM	20	18.0	17.86	0.11	0 mm	2	1968M	6	top	98.7	17.571	1.290	1.033	1.013	1.350	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**	**UMPC Extremity** **4.0 W/kg (mW/g)** averaged over 10 grams

Note: Blue entry represents variability measurement.

Table 11-55
DTS WLAN MIMO UMPC Extremity SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2452	9	802.11n	OFDM	20	18.0	17.96	18.0	17.85	-0.16	0 mm	MIMO	1921M	13	back	98.7	2.528	-	1.035	1.013	-	
2452	9	802.11n	OFDM	20	18.0	17.96	18.0	17.85	0.04	0 mm	MIMO	1921M	13	front	98.7	4.299	-	1.035	1.013	-	
2452	9	802.11n	OFDM	20	18.0	17.96	18.0	17.85	0.19	0 mm	MIMO	1921M	13	top	98.7	5.038	0.925	1.035	1.013	0.970	
2452	9	802.11n	OFDM	20	18.0	17.96	18.0	17.85	0.11	0 mm	MIMO	1921M	13	right	98.7	1.806	-	1.035	1.013	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams					

Note: To achieve the 21.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18.0 dBm.

Table 11-56
NII WLAN MIMO UMPC Extremity SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	-0.07	0 mm	MIMO	1968M	13	back	98.6	5.602	-	1.023	1.014	-	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	0.01	0 mm	MIMO	1968M	13	front	98.6	10.796	1.090	1.023	1.014	1.131	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	-0.16	0 mm	MIMO	1968M	13	top	98.6	8.535	0.759	1.023	1.014	0.787	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	0.19	0 mm	MIMO	1968M	13	right	98.6	0.480	-	1.023	1.014	-	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	-0.12	0 mm	MIMO	1968M	13	back	98.6	9.213	-	1.033	1.014	-	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	0.04	0 mm	MIMO	1968M	13	front	98.6	11.974	1.270	1.033	1.014	1.330	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	-0.16	0 mm	MIMO	1968M	13	top	98.6	11.418	1.010	1.033	1.014	1.058	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	-0.13	0 mm	MIMO	1968M	13	right	98.6	1.271	-	1.033	1.014	-	
5785	157	802.11n	OFDM	20	18.0	17.91	18.0	17.84	-0.07	0 mm	MIMO	1968M	13	back	98.6	19.583	1.490	1.038	1.014	1.568	
5785	157	802.11n	OFDM	20	18.0	17.91	18.0	17.84	0.04	0 mm	MIMO	1968M	13	front	98.6	10.749	-	1.038	1.014	-	
5745	149	802.11n	OFDM	20	18.0	17.89	18.0	17.66	-0.12	0 mm	MIMO	1968M	13	top	98.6	26.314	1.570	1.081	1.014	1.721	
5785	157	802.11n	OFDM	20	18.0	17.91	18.0	17.84	-0.12	0 mm	MIMO	1968M	13	top	98.6	20.064	1.570	1.038	1.014	1.652	
5825	165	802.11n	OFDM	20	18.0	17.93	18.0	17.77	-0.20	0 mm	MIMO	1968M	13	top	98.6	28.388	1.670	1.054	1.014	1.785	A76
5785	157	802.11n	OFDM	20	18.0	17.91	18.0	17.84	-0.14	0 mm	MIMO	1968M	13	right	98.6	1.547	-	1.038	1.014	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams					

Note: To achieve the 21.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18.0 dBm.

Table 11-57
5 GHz WLAN UMPC Extremity SAR with 2.4 GHz and 5 GHz WLAN SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	0.07	0 mm	MIMO	1968M	27	back	97.3	2.249	-	1.030	1.028	-	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	0.03	0 mm	MIMO	1968M	27	front	97.3	4.030	0.428	1.030	1.028	0.453	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	-0.17	0 mm	MIMO	1968M	27	top	97.3	3.169	-	1.030	1.028	-	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	0.00	0 mm	MIMO	1968M	27	right	97.3	0.212	-	1.030	1.028	-	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	-0.10	0 mm	MIMO	1968M	58.5	back	90.7	2.742	-	1.318	1.103	-	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	0.05	0 mm	MIMO	1968M	58.5	front	90.7	3.613	-	1.318	1.103	-	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	-0.17	0 mm	MIMO	1968M	58.5	top	90.7	4.366	0.293	1.318	1.103	0.426	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	0.00	0 mm	MIMO	1968M	58.5	right	90.7	0.422	-	1.318	1.103	-	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	-0.17	0 mm	MIMO	1968M	58.5	back	90.7	2.454	-	1.387	1.103	-	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	0.06	0 mm	MIMO	1968M	58.5	front	90.7	3.500	-	1.387	1.103	-	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	-0.19	0 mm	MIMO	1968M	58.5	top	90.7	7.144	0.407	1.387	1.103	0.623	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	0.00	0 mm	MIMO	1968M	58.5	right	90.7	0.406	-	1.387	1.103	-	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	UMPC Extremity
Spatial Peak	4.0 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 10 grams

Note: NII MIMO was additionally evaluated at the maximum allowed output power during operations with Simultaneous 2.4 GHz and 5 GHz WLAN. 2.4 GHz WIFI was not transmitting during the above evaluations.

Table 11-58
DSS UMPC Extremity SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (10g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.											(W/kg)			(W/kg)	
2402	0	Bluetooth	FHSS	16.5	16.18	-0.10	0 mm	1921M	1	back	77.1	0.178	1.076	1.297	0.248	
2402	0	Bluetooth	FHSS	16.5	16.18	0.14	0 mm	1921M	1	front	77.1	0.535	1.076	1.297	0.747	A77
2402	0	Bluetooth	FHSS	16.5	16.18	-0.12	0 mm	1921M	1	top	77.1	0.433	1.076	1.297	0.604	
2402	0	Bluetooth	FHSS	16.5	16.18	-0.16	0 mm	1921M	1	right	77.1	0.152	1.076	1.297	0.212	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	UMPC Extremity
Spatial Peak	4.0 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 10 grams

11.7 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, and FCC KDB Publication 447498 D01v06.
2. Batteries are fully charged at the beginning of the SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v06.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 15 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB Publication 648474 D04v01r03, body-worn SAR was evaluated without a headset connected to the device. Since the standalone reported body-worn SAR was ≤ 1.2 W/kg, no additional body-worn SAR evaluations using a headset cable were required.
8. Per FCC KDB 865664 D01v01r04, variability SAR tests were performed when the measured SAR results for a frequency band were greater than or equal to 0.8 W/kg. Repeated SAR measurements are highlighted in the tables above for clarity. Please see Section 13 for variability analysis.
9. During SAR Testing for the Wireless Router conditions per FCC KDB Publication 941225 D06v02r01, the actual Portable Hotspot operation (with actual simultaneous transmission of a transmitter with WIFI) was not activated (See Section 6.7 for more details).
10. Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" when it is in closed configuration since the diagonal dimension is > 160 mm and < 200 mm. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Additional SAR tests for phablet SAR were evaluated per KDB 616217 Section 6 (See Section 6.9 for more information)
11. This device supports dynamic antenna tuning for some bands. Per FCC Guidance, SAR was measured according to the normally required SAR measurement configurations with tuner active. The auto-tune state determined by the device was verified before and after each SAR measurement and is listed in tables above. Please see Section 14 for supplemental data.
12. This device utilizes power reduction for some wireless modes and technologies, as outlined in Section 1.3. The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous transmission scenarios.
13. Unless otherwise noted, when 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.
14. Per FCC KDB Publication 941225 D07v01r02, this device is considered a "UMPC mini-tablet" when it is in open configuration. UMPC body 1g SAR tests are required on all surfaces and edges ≤ 25 mm from a transmitting antenna. Therefore, to address hand exposure, UMPC extremity 10g SAR tests are required at a test separation distance of 0 mm for all measured 1g SAR (at 10 mm) configurations.

GSM Test Notes:

1. Body-Worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.
2. Justification for reduced test configurations per KDB Publication 941225 D01v03r01 and October 2013 TCB Workshop Notes: The source-based frame-averaged output power was evaluated for all GPRS/EDGE slot configurations. The configuration with the highest target frame averaged output power was evaluated for hotspot SAR. When the maximum frame-averaged powers are equivalent across two or more slots (within 0.25 dB), the configuration with the most number of time slots was tested.
3. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg for 1g evaluations then testing at the other channels is not required for such test configuration(s). When the maximum output power

variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel was used.

UMTS Notes:

1. UMTS mode in was tested under RMC 12.2 kbps with HSPA Inactive per KDB Publication 941225 D01v03r01. AMR and HSPA SAR was not required per the 3G Test Reduction Procedure in KDB Publication 941225 D01v03r01.
2. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg for 1g evaluations then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel was used.

LTE Notes:

1. LTE Considerations: LTE test configurations are determined according to SAR Evaluation Considerations for LTE Devices in FCC KDB Publication 941225 D05v02r04. The general test procedures used for testing can be found in Section 8.5.4.
2. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.
3. A-MPR was disabled for all SAR tests by setting NS=01 and MCC=001 on the base station simulator. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).
4. Per FCC KDB Publication 447498 D01v06, when the reported LTE Band 41 SAR measured at the highest output power channel in a given a test configuration was > 0.6 W/kg for 1g evaluations, testing at the other channels was required for such test configurations.
5. TDD LTE was tested per the guidance provided in FCC KDB Publication 941225 D05v02r04. Testing was performed using UL-DL configuration 0 with 6 UL subframes and 2 S subframes using extended cyclic prefix only and special subframe configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4, the duty factor for special subframe configuration 6 using extended cyclic prefix is 0.633.

WLAN Notes:

1. For held-to-ear, hotspot, phablet, and UMPC mini-tablet operations, the initial test position procedures were applied. When reported SAR for the initial test position is ≤ 0.4 W/kg for 1g evaluations, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured.
2. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 2.4 GHz WIFI single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11g/n/ax) was not required due to the maximum allowed powers and the highest reported DSSS SAR. See Section 8.6.5 for more information.
3. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 5 GHz WIFI single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission modes were not investigated since the highest reported SAR for initial test configuration adjusted by the ratio of maximum output powers is less than 1.2 W/kg for 1g evaluations. See Section 8.6.6 for more information.
4. Per KDB Publication 248227 D01v02r02, SAR for MIMO was evaluated by following the simultaneous SAR provisions from KDB Publication 447498 D01v06 by either evaluating the sum of the 1g SAR values of each antenna transmitting independently or making a SAR measurement with both antennas transmitting simultaneously. Please see Section 12 for complete analysis.

5. When the maximum reported 1g averaged SAR is ≤0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg for 1g evaluations or all test channels were measured.
6. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated EMC test reports.
7. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

Bluetooth Notes

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests test mode type. Per October 2016 TCB Workshop Notes, the reported SAR was scaled to the 100% transmission duty factor to determine compliance. See Section 9.5 for the time domain plot and calculation for the duty factor of the device.

12 FCC MULTI-TX AND ANTENNA SAR CONSIDERATIONS

12.1 Introduction

The following procedures adopted from FCC KDB Publication 447498 D01v06 are applicable to devices with built-in unlicensed transmitters such as 802.11 and Bluetooth devices which may simultaneously transmit with the licensed transmitter.

12.2 Simultaneous Transmission Procedures

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per FCC KDB Publication 447498 D01v06 4.3.2 and IEEE 1528-2013 Section 6.3.4.1.2, simultaneous transmission SAR test exclusion may be applied when the sum of the 1g or 10g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is within SAR limits. The different test positions in an exposure condition may be considered collectively to determine SAR test exclusion according to the sum of 1g or 10g SAR.

12.3 Head SAR Simultaneous Transmission Analysis

Table 12-1
Simultaneous Transmission Scenario with 2.4 GHz WLAN (Held to Ear)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	0.172	0.102	0.053	0.274	0.225	0.327
	GSM 1900	0.057	0.102	0.053	0.159	0.110	0.212
	UMTS 850	0.375	0.102	0.053	0.477	0.428	**0.530**
	UMTS 1750	0.163	0.102	0.053	0.265	0.216	0.318
	UMTS 1900	0.131	0.102	0.053	0.233	0.184	0.286
	LTE Band 12	0.194	0.102	0.053	0.296	0.247	0.349
	LTE Band 13	0.232	0.102	0.053	0.334	0.285	0.387
	LTE Band 26 (Cell)	0.324	0.102	0.053	0.426	0.377	0.479
	LTE Band 66 (AWS)	0.165	0.102	0.053	0.267	0.218	0.320
	LTE Band 25 (PCS)	0.152	0.102	0.053	0.254	0.205	0.307
	LTE Band 41	0.100	0.102	0.053	0.202	0.153	0.255

Table 12-2
Simultaneous Transmission Scenario with 5 GHz WLAN (Held to Ear)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	0.172	0.119	0.077	0.291	0.249	0.368
	GSM 1900	0.057	0.119	0.077	0.176	0.134	0.253
	UMTS 850	0.375	0.119	0.077	0.494	0.452	**0.571**
	UMTS 1750	0.163	0.119	0.077	0.282	0.240	0.359
	UMTS 1900	0.131	0.119	0.077	0.250	0.208	0.327
	LTE Band 12	0.194	0.119	0.077	0.313	0.271	0.390
	LTE Band 13	0.232	0.119	0.077	0.351	0.309	0.428
	LTE Band 26 (Cell)	0.324	0.119	0.077	0.443	0.401	0.520
	LTE Band 66 (AWS)	0.165	0.119	0.077	0.284	0.242	0.361
	LTE Band 25 (PCS)	0.152	0.119	0.077	0.271	0.229	0.348
	LTE Band 41	0.100	0.119	0.077	0.219	0.177	0.296

Table 12-3
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (Held to Ear)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	5	1+2+3+4+5
Head SAR	GSM 850	0.172	0.102	0.053	0.119	0.077	0.523
	GSM 1900	0.057	0.102	0.053	0.119	0.077	0.408
	UMTS 850	0.375	0.102	0.053	0.119	0.077	**0.726**
	UMTS 1750	0.163	0.102	0.053	0.119	0.077	0.514
	UMTS 1900	0.131	0.102	0.053	0.119	0.077	0.482
	LTE Band 12	0.194	0.102	0.053	0.119	0.077	0.545
	LTE Band 13	0.232	0.102	0.053	0.119	0.077	0.583
	LTE Band 26 (Cell)	0.324	0.102	0.053	0.119	0.077	0.675
	LTE Band 66 (AWS)	0.165	0.102	0.053	0.119	0.077	0.516
	LTE Band 25 (PCS)	0.152	0.102	0.053	0.119	0.077	0.503
	LTE Band 41	0.100	0.102	0.053	0.119	0.077	0.451

Table 12-4
Simultaneous Transmission Scenario with Bluetooth (Held to Ear)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	GSM 850	0.172	0.049	0.221
	GSM 1900	0.057	0.049	0.106
	UMTS 850	0.375	0.049	**0.424**
	UMTS 1750	0.163	0.049	0.212
	UMTS 1900	0.131	0.049	0.180
	LTE Band 12	0.194	0.049	0.243
	LTE Band 13	0.232	0.049	0.281
	LTE Band 26 (Cell)	0.324	0.049	0.373
	LTE Band 66 (AWS)	0.165	0.049	0.214
	LTE Band 25 (PCS)	0.152	0.049	0.201
	LTE Band 41	0.100	0.049	0.149

Table 12-5
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN (Held to Ear)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	GSM 850	0.172	0.119	0.077	0.049	0.417
	GSM 1900	0.057	0.119	0.077	0.049	0.302
	UMTS 850	0.375	0.119	0.077	0.049	**0.620**
	UMTS 1750	0.163	0.119	0.077	0.049	0.408
	UMTS 1900	0.131	0.119	0.077	0.049	0.376
	LTE Band 12	0.194	0.119	0.077	0.049	0.439
	LTE Band 13	0.232	0.119	0.077	0.049	0.477
	LTE Band 26 (Cell)	0.324	0.119	0.077	0.049	0.569
	LTE Band 66 (AWS)	0.165	0.119	0.077	0.049	0.410
	LTE Band 25 (PCS)	0.152	0.119	0.077	0.049	0.397
	LTE Band 41	0.100	0.119	0.077	0.049	0.345

12.4 Body-Worn Simultaneous Transmission Analysis

Table 12-6
Simultaneous Transmission Scenario with 2.4 GHz WLAN (Body-Worn at 1.5 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Body-Worn	GSM 850	0.130	0.049	0.056	0.179	0.186	0.235
	GSM 1900	0.187	0.049	0.056	0.236	0.243	0.292
	UMTS 850	0.173	0.049	0.056	0.222	0.229	0.278
	UMTS 1750	0.717	0.049	0.056	0.766	0.773	**0.822**
	UMTS 1900	0.384	0.049	0.056	0.433	0.440	0.489
	LTE Band 12	0.206	0.049	0.056	0.255	0.262	0.311
	LTE Band 13	0.253	0.049	0.056	0.302	0.309	0.358
	LTE Band 26 (Cell)	0.134	0.049	0.056	0.183	0.190	0.239
	LTE Band 66 (AWS)	0.658	0.049	0.056	0.707	0.714	0.763
	LTE Band 25 (PCS)	0.354	0.049	0.056	0.403	0.410	0.459
	LTE Band 41	0.132	0.049	0.056	0.181	0.188	0.237

Table 12-7
Simultaneous Transmission Scenario with 5 GHz WLAN (Body-Worn at 1.5 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Body-Worn	GSM 850	0.130	0.385	0.168	0.515	0.298	0.683
	GSM 1900	0.187	0.385	0.168	0.572	0.355	0.740
	UMTS 850	0.173	0.385	0.168	0.558	0.341	0.726
	UMTS 1750	0.717	0.385	0.168	1.102	0.885	**1.270**
	UMTS 1900	0.384	0.385	0.168	0.769	0.552	0.937
	LTE Band 12	0.206	0.385	0.168	0.591	0.374	0.759
	LTE Band 13	0.253	0.385	0.168	0.638	0.421	0.806
	LTE Band 26 (Cell)	0.134	0.385	0.168	0.519	0.302	0.687
	LTE Band 66 (AWS)	0.658	0.385	0.168	1.043	0.826	1.211
	LTE Band 25 (PCS)	0.354	0.385	0.168	0.739	0.522	0.907
	LTE Band 41	0.132	0.385	0.168	0.517	0.300	0.685

Table 12-8
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (Body-Worn at 1.5 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	5	1+2+3+4+5
Body-Worn	GSM 850	0.130	0.049	0.056	0.385	0.168	0.788
	GSM 1900	0.187	0.049	0.056	0.385	0.168	0.845
	UMTS 850	0.173	0.049	0.056	0.385	0.168	0.831
	UMTS 1750	0.717	0.049	0.056	0.385	0.168	**1.375**
	UMTS 1900	0.384	0.049	0.056	0.385	0.168	1.042
	LTE Band 12	0.206	0.049	0.056	0.385	0.168	0.864
	LTE Band 13	0.253	0.049	0.056	0.385	0.168	0.911
	LTE Band 26 (Cell)	0.134	0.049	0.056	0.385	0.168	0.792
	LTE Band 66 (AWS)	0.658	0.049	0.056	0.385	0.168	1.316
	LTE Band 25 (PCS)	0.354	0.049	0.056	0.385	0.168	1.012
	LTE Band 41	0.132	0.049	0.056	0.385	0.168	0.790

Table 12-9
Simultaneous Transmission Scenario with Bluetooth (Body-Worn at 1.5 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body-Worn	GSM 850	0.130	0.022	0.152
	GSM 1900	0.187	0.022	0.209
	UMTS 850	0.173	0.022	0.195
	UMTS 1750	0.717	0.022	**0.739**
	UMTS 1900	0.384	0.022	0.406
	LTE Band 12	0.206	0.022	0.228
	LTE Band 13	0.253	0.022	0.275
	LTE Band 26 (Cell)	0.134	0.022	0.156
	LTE Band 66 (AWS)	0.658	0.022	0.680
	LTE Band 25 (PCS)	0.354	0.022	0.376
	LTE Band 41	0.132	0.022	0.154

Table 12-10
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN (Body-Worn at 1.5 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Body-Worn	GSM 850	0.130	0.385	0.168	0.022	0.705
	GSM 1900	0.187	0.385	0.168	0.022	0.762
	UMTS 850	0.173	0.385	0.168	0.022	0.748
	UMTS 1750	0.717	0.385	0.168	0.022	**1.292**
	UMTS 1900	0.384	0.385	0.168	0.022	0.959
	LTE Band 12	0.206	0.385	0.168	0.022	0.781
	LTE Band 13	0.253	0.385	0.168	0.022	0.828
	LTE Band 26 (Cell)	0.134	0.385	0.168	0.022	0.709
	LTE Band 66 (AWS)	0.658	0.385	0.168	0.022	1.233
	LTE Band 25 (PCS)	0.354	0.385	0.168	0.022	0.929
	LTE Band 41	0.132	0.385	0.168	0.022	0.707

12.5 Hotspot SAR Simultaneous Transmission Analysis

Per FCC KDB Publication 941225 D06v02r01, the devices edges with antennas more than 2.5 cm from edge are not required to be evaluated for SAR ("-").

(*) For test positions that were not required to be evaluated for WLAN SAR per FCC KDB publication 248227, the worst case WLAN SAR result for the applicable exposure conditions was used for simultaneous transmission analysis.

Table 12-11
Simultaneous Transmission Scenario with 2.4 GHz WLAN (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	0.563	0.115	0.162	0.678	0.725	0.840
	GPRS 1900	0.985	0.115	0.162	1.100	1.147	**1.262**
	UMTS 850	0.566	0.115	0.162	0.681	0.728	0.843
	UMTS 1750	0.745	0.115	0.162	0.860	0.907	1.022
	UMTS 1900	0.754	0.115	0.162	0.869	0.916	1.031
	LTE Band 12	0.292	0.115	0.162	0.407	0.454	0.569
	LTE Band 13	0.390	0.115	0.162	0.505	0.552	0.667
	LTE Band 26 (Cell)	0.563	0.115	0.162	0.678	0.725	0.840
	LTE Band 66 (AWS)	0.903	0.115	0.162	1.018	1.065	1.180
	LTE Band 25 (PCS)	0.971	0.115	0.162	1.086	1.133	1.248
	LTE Band 41	0.438	0.115	0.162	0.553	0.600	0.715

Table 12-12
Simultaneous Transmission Scenario with 5 GHz WLAN (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	0.563	0.220	0.223	0.783	0.786	1.006
	GPRS 1900	0.985	0.220	0.223	1.205	1.208	**1.428**
	UMTS 850	0.566	0.220	0.223	0.786	0.789	1.009
	UMTS 1750	0.745	0.220	0.223	0.965	0.968	1.188
	UMTS 1900	0.754	0.220	0.223	0.974	0.977	1.197
	LTE Band 12	0.292	0.220	0.223	0.512	0.515	0.735
	LTE Band 13	0.390	0.220	0.223	0.610	0.613	0.833
	LTE Band 26 (Cell)	0.563	0.220	0.223	0.783	0.786	1.006
	LTE Band 66 (AWS)	0.903	0.220	0.223	1.123	1.126	1.346
	LTE Band 25 (PCS)	0.971	0.220	0.223	1.191	1.194	1.414
	LTE Band 41	0.438	0.220	0.223	0.658	0.661	0.881

Table 12-13
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	5	1+2+3+4+5
Hotspot SAR	GPRS 850	0.563	0.115	0.162	0.220	0.223	1.283
	GPRS 1900	0.985	0.115	0.162	0.220	0.223	See Table Below
	UMTS 850	0.566	0.115	0.162	0.220	0.223	1.286
	UMTS 1750	0.745	0.115	0.162	0.220	0.223	1.465
	UMTS 1900	0.754	0.115	0.162	0.220	0.223	**1.474**
	LTE Band 12	0.292	0.115	0.162	0.220	0.223	1.012
	LTE Band 13	0.390	0.115	0.162	0.220	0.223	1.110
	LTE Band 26 (Cell)	0.563	0.115	0.162	0.220	0.223	1.283
	LTE Band 66 (AWS)	0.903	0.115	0.162	0.220	0.223	See Table Below
	LTE Band 25 (PCS)	0.971	0.115	0.162	0.220	0.223	See Table Below
	LTE Band 41	0.438	0.115	0.162	0.220	0.223	1.158

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	5	1+2+3+4+5
Hotspot SAR	Back	0.422	0.115*	0.162	0.220	0.223	**1.142**
	Front	0.189	0.115*	0.162*	0.220*	0.223*	0.909
	Top	-	0.115*	0.162*	0.220*	0.223*	0.720
	Bottom	0.985	-	-	-	-	0.985
	Right	0.139	0.115	-	0.220*	-	0.474
	Left	0.100	-	0.162*	-	0.223*	0.485

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	5	1+2+3+4+5
Hotspot SAR	Back	0.601	0.115*	0.162	0.220	0.223	**1.321**
	Front	0.273	0.115*	0.162*	0.220*	0.223*	0.993
	Top	-	0.115*	0.162*	0.220*	0.223*	0.720
	Bottom	0.903	-	-	-	-	0.903
	Right	0.224	0.115	-	0.220*	-	0.559
	Left	0.182	-	0.162*	-	0.223*	0.567

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	5	1+2+3+4+5
Hotspot SAR	Back	0.412	0.115*	0.162	0.220	0.223	**1.132**
	Front	0.206	0.115*	0.162*	0.220*	0.223*	0.926
	Top	-	0.115*	0.162*	0.220*	0.223*	0.720
	Bottom	0.971	-	-	-	-	0.971
	Right	0.128	0.115	-	0.220*	-	0.463
	Left	0.105	-	0.162*	-	0.223*	0.490

Table 12-14
Simultaneous Transmission Scenario with Bluetooth (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	GPRS 850	0.563	0.066	0.629
	GPRS 1900	0.985	0.066	**1.051**
	UMTS 850	0.566	0.066	0.632
	UMTS 1750	0.745	0.066	0.811
	UMTS 1900	0.754	0.066	0.820
	LTE Band 12	0.292	0.066	0.358
	LTE Band 13	0.390	0.066	0.456
	LTE Band 26 (Cell)	0.563	0.066	0.629
	LTE Band 66 (AWS)	0.903	0.066	0.969
	LTE Band 25 (PCS)	0.971	0.066	1.037
	LTE Band 41	0.438	0.066	0.504

Table 12-15
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Hotspot SAR	GPRS 850	0.563	0.220	0.223	0.066	1.072
	GPRS 1900	0.985	0.220	0.223	0.066	**1.494**
	UMTS 850	0.566	0.220	0.223	0.066	1.075
	UMTS 1750	0.745	0.220	0.223	0.066	1.254
	UMTS 1900	0.754	0.220	0.223	0.066	1.263
	LTE Band 12	0.292	0.220	0.223	0.066	0.801
	LTE Band 13	0.390	0.220	0.223	0.066	0.899
	LTE Band 26 (Cell)	0.563	0.220	0.223	0.066	1.072
	LTE Band 66 (AWS)	0.903	0.220	0.223	0.066	1.412
	LTE Band 25 (PCS)	0.971	0.220	0.223	0.066	1.480
	LTE Band 41	0.438	0.220	0.223	0.066	0.947

12.6 Phablet Simultaneous Transmission Analysis

For SAR summation, the highest reported SAR across all test distances was used as the most conservative evaluation for simultaneous transmission analysis for each device edge.

Per FCC KDB Publication 648474 D04 Handset SAR, Phablet SAR tests were not required if wireless router 1g SAR (scaled to the maximum output power, including tolerance) < 1.2 W/kg. Therefore no further analysis beyond the tables included in this section was required to determine that possible simultaneous transmission scenarios would not exceed the SAR limit.

Table 12-16
Simultaneous Transmission Scenario with 5 GHz WLAN (Phablet)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Phablet SAR	GPRS 1900	2.790	0.847	1.079	**3.637**	**3.869**
	UMTS 1750	2.358	0.847	1.079	3.205	3.437
	UMTS 1900	2.370	0.847	1.079	3.217	3.449
	LTE Band 66 (AWS)	2.704	0.847	1.079	3.551	3.783
	LTE Band 25 (PCS)	2.535	0.847	1.079	3.382	3.614
	LTE Band 41	2.087	0.847	1.079	2.934	3.166

Table 12-17
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (Phablet)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	GPRS 1900	2.790	0.977	**3.767**
	UMTS 1750	2.358	0.977	3.335
	UMTS 1900	2.370	0.977	3.347
	LTE Band 66 (AWS)	2.704	0.977	3.681
	LTE Band 25 (PCS)	2.535	0.977	3.512
	LTE Band 41	2.087	0.977	3.064

12.7 UMPC Body Simultaneous Transmission Analysis

Per FCC KDB Publication 941225 D06v02r01, the devices edges with antennas more than 2.5 cm from edge are not required to be evaluated for SAR ("-").

(*) For test positions that were not required to be evaluated for WLAN SAR per FCC KDB publication 248227, the worst case WLAN SAR result for the applicable exposure conditions was used for simultaneous transmission analysis.

Table 12-18
Simultaneous Transmission Scenario with 2.4 GHz WLAN (UMPC Body)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
UMPC Body SAR	GPRS 850	0.543	0.319	0.138	0.862	0.681	1.000
	GPRS 1900	0.693	0.319	0.138	1.012	0.831	1.150
	UMTS 850	0.631	0.319	0.138	0.950	0.769	1.088
	UMTS 1750	1.162	0.319	0.138	1.481	1.300	See Table Below
	UMTS 1900	0.943	0.319	0.138	1.262	1.081	1.400
	LTE Band 12	0.243	0.319	0.138	0.562	0.381	0.700
	LTE Band 13	0.279	0.319	0.138	0.598	0.417	0.736
	LTE Band 26 (Cell)	0.542	0.319	0.138	0.861	0.680	0.999
	LTE Band 66 (AWS)	1.106	0.319	0.138	1.425	1.244	**1.563**
	LTE Band 25 (PCS)	1.006	0.319	0.138	1.325	1.144	1.463
	LTE Band 41	0.882	0.319	0.138	1.201	1.020	1.339

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	Back	0.978	0.319*	0.138*	1.435
	Front	1.162	0.319	0.058	**1.539**
	Top	-	0.319*	0.138	0.457
	Bottom	1.023	-	-	1.023
	Right	0.392	0.319*	-	0.711

Table 12-19
Simultaneous Transmission Scenario with 5 GHz WLAN (UMPC Body)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Body SAR	GPRS 850	0.543	0.574	0.451	1.117	0.994
	GPRS 1900	0.693	0.574	0.451	1.267	1.144
	UMTS 850	0.631	0.574	0.451	1.205	1.082
	UMTS 1750	1.162	0.574	0.451	See Table Below	See Table Below
	UMTS 1900	0.943	0.574	0.451	1.517	1.394
	LTE Band 12	0.243	0.574	0.451	0.817	0.694
	LTE Band 13	0.279	0.574	0.451	0.853	0.730
	LTE Band 26 (Cell)	0.542	0.574	0.451	1.116	0.993
	LTE Band 66 (AWS)	1.106	0.574	0.451	See Table Below	1.557
	LTE Band 25 (PCS)	1.006	0.574	0.451	**1.580**	1.457
	LTE Band 41	0.882	0.574	0.451	1.456	1.333

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Body SAR	Back	0.978	0.574	0.195	1.552	1.173
	Front	1.162	0.430	0.147	**1.592**	1.309
	Top	-	0.574*	0.451	0.574	0.451
	Bottom	1.023	-	-	1.023	1.023
	Right	0.392	0.574*	-	0.966	0.392

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR	Back	0.804	0.574	1.378
	Front	1.106	0.430	**1.536**
	Top	-	0.574*	0.574
	Bottom	1.051	-	1.051
	Right	0.392	0.574*	0.966

Table 12-20
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (UMPC Body)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR	GPRS 850	0.543	0.829	1.372
	GPRS 1900	0.693	0.829	**1.522**
	UMTS 850	0.631	0.829	1.460
	UMTS 1750	1.162	0.829	See Table Below
	UMTS 1900	0.943	0.829	See Table Below
	LTE Band 12	0.243	0.829	1.072
	LTE Band 13	0.279	0.829	1.108
	LTE Band 26 (Cell)	0.542	0.829	1.371
	LTE Band 66 (AWS)	1.106	0.829	See Table Below
	LTE Band 25 (PCS)	1.006	0.829	See Table Below
	LTE Band 41	0.882	0.829	See Table Below

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
UMPC Body SAR	Back	0.978	0.829	See Note 1	0.01
	Front	1.162	0.549	See Note 1	0.01
	Top	-	0.566	0.566	N/A
	Bottom	1.023	-	1.023	N/A
	Right	0.392	0.829*	1.221	N/A

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR	Back	0.684	0.829	**1.513**
	Front	0.665	0.549	1.214
	Top	-	0.566	0.566
	Bottom	0.943	-	0.943
	Right	0.188	0.829*	1.017

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
UMPC Body SAR	Back	0.804	0.829	See Note 1	0.01
	Front	1.106	0.549	See Note 1	0.01
	Top	-	0.566	0.566	N/A
	Bottom	1.051	-	1.051	N/A
	Right	0.392	0.829*	1.221	N/A

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR	Back	0.636	0.829	**1.465**
	Front	0.653	0.549	1.202
	Top	-	0.566	0.566
	Bottom	1.006	-	1.006
	Right	0.198	0.829*	1.027

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR	Back	0.571	0.829	**1.400**
	Front	0.590	0.549	1.139
	Top	-	0.566	0.566
	Bottom	0.882	-	0.882
	Right	0.413	0.829*	1.242

Table 12-21
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (UMPC Body)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN MIMO at 19 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	GPRS 850	0.543	0.190	0.299	1.032
	GPRS 1900	0.693	0.190	0.299	1.182
	UMTS 850	0.631	0.190	0.299	1.120
	UMTS 1750	1.162	0.190	0.299	See Table Below
	UMTS 1900	0.943	0.190	0.299	1.432
	LTE Band 12	0.243	0.190	0.299	0.732
	LTE Band 13	0.279	0.190	0.299	0.768
	LTE Band 26 (Cell)	0.542	0.190	0.299	1.031
	LTE Band 66 (AWS)	1.106	0.190	0.299	See Table Below
	LTE Band 25 (PCS)	1.006	0.190	0.299	**1.495**
	LTE Band 41	0.882	0.190	0.299	1.371

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN MIMO at 19 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	Back	0.978	0.190*	0.299	1.467
	Front	1.162	0.190*	0.192	**1.544**
	Top	-	0.190	0.181	0.371
	Bottom	1.023	-	-	1.023
	Right	0.392	0.190*	0.299*	0.881

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN MIMO at 19 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	Back	0.804	0.190*	0.299	1.293
	Front	1.106	0.190*	0.192	**1.488**
	Top	-	0.190	0.181	0.371
	Bottom	1.051	-	-	1.051
	Right	0.392	0.190*	0.299*	0.881

Table 12-22
Simultaneous Transmission Scenario with Bluetooth (UMPC Body)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR	GPRS 850	0.543	0.124	0.667
	GPRS 1900	0.693	0.124	0.817
	UMTS 850	0.631	0.124	0.755
	UMTS 1750	1.162	0.124	**1.286**
	UMTS 1900	0.943	0.124	1.067
	LTE Band 12	0.243	0.124	0.367
	LTE Band 13	0.279	0.124	0.403
	LTE Band 26 (Cell)	0.542	0.124	0.666
	LTE Band 66 (AWS)	1.106	0.124	1.230
	LTE Band 25 (PCS)	1.006	0.124	1.130
	LTE Band 41	0.882	0.124	1.006

Table 12-23
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN Antenna 1 (UMPC Body)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	GPRS 850	0.543	0.574	0.124	1.241
	GPRS 1900	0.693	0.574	0.124	1.391
	UMTS 850	0.631	0.574	0.124	1.329
	UMTS 1750	1.162	0.574	0.124	See Table Below
	UMTS 1900	0.943	0.574	0.124	See Table Below
	LTE Band 12	0.243	0.574	0.124	0.941
	LTE Band 13	0.279	0.574	0.124	0.977
	LTE Band 26 (Cell)	0.542	0.574	0.124	1.240
	LTE Band 66 (AWS)	1.106	0.574	0.124	See Table Below
	LTE Band 25 (PCS)	1.006	0.574	0.124	See Table Below
	LTE Band 41	0.882	0.574	0.124	**1.580**

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
UMPC Body SAR	Back	0.978	0.574	0.068	See Note 1	0.01	0.01	0.02
	Front	1.162	0.430	0.124	See Note 1	0.01	0.01	0.02
	Top	-	0.574*	0.113	0.687	N/A	N/A	N/A
	Bottom	1.023	-	-	1.023	N/A	N/A	N/A
	Right	0.392	0.574*	0.089	1.055	N/A	N/A	N/A

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	Back	0.684	0.574	0.068	**1.326**
	Front	0.665	0.430	0.124	1.219
	Top	-	0.574*	0.113	0.687
	Bottom	0.943	-	-	0.943
	Right	0.188	0.574*	0.089	0.851

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
UMPC Body SAR	Back	0.804	0.574	0.068	**1.446**	N/A	N/A	N/A
	Front	1.106	0.430	0.124	See Note 1	0.01	0.01	0.02
	Top	-	0.574*	0.113	0.687	N/A	N/A	N/A
	Bottom	1.051	-	-	1.051	N/A	N/A	N/A
	Right	0.392	0.574*	0.089	1.055	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	Back	0.636	0.574	0.068	**1.278**
	Front	0.653	0.430	0.124	1.207
	Top	-	0.574*	0.113	0.687
	Bottom	1.006	-	-	1.006
	Right	0.198	0.574*	0.089	0.861

Table 12-24
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN Antenna 2 (UMPC Body)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	GPRS 850	0.543	0.451	0.124	1.118
	GPRS 1900	0.693	0.451	0.124	1.268
	UMTS 850	0.631	0.451	0.124	1.206
	UMTS 1750	1.162	0.451	0.124	See Table Below
	UMTS 1900	0.943	0.451	0.124	1.518
	LTE Band 12	0.243	0.451	0.124	0.818
	LTE Band 13	0.279	0.451	0.124	0.854
	LTE Band 26 (Cell)	0.542	0.451	0.124	1.117
	LTE Band 66 (AWS)	1.106	0.451	0.124	See Table Below
	LTE Band 25 (PCS)	1.006	0.451	0.124	**1.581**
	LTE Band 41	0.882	0.451	0.124	1.457

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	Back	0.978	0.195	0.068	1.241
	Front	1.162	0.147	0.124	1.433
	Top	-	0.451	0.113	0.564
	Bottom	1.023	-	-	1.023
	Right	0.392	-	0.089	0.481

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	Back	0.804	0.195	0.068	1.067
	Front	1.106	0.147	0.124	**1.377**
	Top	-	0.451	0.113	0.564
	Bottom	1.051	-	-	1.051
	Right	0.392	-	0.089	0.481

Table 12-25
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN MIMO (UMPC Body)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	GPRS 850	0.543	0.829	0.124	1.496
	GPRS 1900	0.693	0.829	0.124	See Table Below
	UMTS 850	0.631	0.829	0.124	**1.584**
	UMTS 1750	1.162	0.829	0.124	See Table Below
	UMTS 1900	0.943	0.829	0.124	See Table Below
	LTE Band 12	0.243	0.829	0.124	1.196
	LTE Band 13	0.279	0.829	0.124	1.232
	LTE Band 26 (Cell)	0.542	0.829	0.124	1.495
	LTE Band 66 (AWS)	1.106	0.829	0.124	See Table Below
	LTE Band 25 (PCS)	1.006	0.829	0.124	See Table Below
	LTE Band 41	0.882	0.829	0.124	See Table Below

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	Back	0.587	0.829	0.068	**1.484**
	Front	0.477	0.549	0.124	1.150
	Top	-	0.566	0.113	0.679
	Bottom	0.693	-	-	0.693
	Right	0.139	0.829*	0.089	1.057

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
UMPC Body SAR	Back	0.978	0.829	0.068	See Note 1	0.01	0.01	0.02
	Front	1.162	0.549	0.124	See Note 1	0.01	0.01	0.02
	Top	-	0.566	0.113	0.679	N/A	N/A	N/A
	Bottom	1.023	-	-	1.023	N/A	N/A	N/A
	Right	0.392	0.829*	0.089	**1.310**	N/A	N/A	N/A

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	Back	0.684	0.829	0.068	**1.581**
	Front	0.665	0.549	0.124	1.338
	Top	-	0.566	0.113	0.679
	Bottom	0.943	-	-	0.943
	Right	0.188	0.829*	0.089	1.106

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
UMPC Body SAR	Back	0.804	0.829	0.068	See Note 1	0.01	0.01	0.02
	Front	1.106	0.549	0.124	See Note 1	0.01	0.01	0.02
	Top	-	0.566	0.113	0.679	N/A	N/A	N/A
	Bottom	1.051	-	-	1.051	N/A	N/A	N/A
	Right	0.392	0.829*	0.089	**1.310**	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	Back	0.636	0.829	0.068	**1.533**
	Front	0.653	0.549	0.124	1.326
	Top	-	0.566	0.113	0.679
	Bottom	1.006	-	-	1.006
	Right	0.198	0.829*	0.089	1.116

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	Back	0.571	0.829	0.068	**1.468**
	Front	0.590	0.549	0.124	1.263
	Top	-	0.566	0.113	0.679
	Bottom	0.882	-	-	0.882
	Right	0.413	0.829*	0.089	1.331

Notes:

1. No evaluation was performed to determine the aggregate 1g SAR for these configurations as the SPLS ratio between the antenna pairs was not greater than 0.04 per FCC KDB 447498 D01v06. See Section 12.9 for detailed SPLS ratio analysis.

12.8 UMPC Extremity Simultaneous Transmission Analysis

Per FCC KDB Publication 941225 D06v02r01, the devices edges with antennas more than 2.5 cm from edge are not required to be evaluated for SAR ("-").

(*) For test positions that were not required to be evaluated for WLAN SAR per FCC KDB publication 248227, the worst case WLAN SAR result for the applicable exposure conditions was used for simultaneous transmission analysis.

Table 12-26
Simultaneous Transmission Scenario with 2.4 GHz WLAN (UMPC Extremity)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Extremity SAR	GPRS 850	1.393	2.585	0.936	**3.978**	2.329
	GPRS 1900	3.141	2.585	0.936	See Table Below	See Table Below
	UMTS 850	1.880	2.585	0.936	See Table Below	2.816
	UMTS 1750	2.668	2.585	0.936	See Table Below	3.604
	UMTS 1900	2.603	2.585	0.936	See Table Below	3.539
	LTE Band 12	1.217	2.585	0.936	3.802	2.153
	LTE Band 13	1.584	2.585	0.936	See Table Below	2.520
	LTE Band 26 (Cell)	1.901	2.585	0.936	See Table Below	2.837
	LTE Band 66 (AWS)	2.972	2.585	0.936	See Table Below	3.908
	LTE Band 25 (PCS)	3.108	2.585	0.936	See Table Below	See Table Below
	LTE Band 41	2.452	2.585	0.936	See Table Below	3.388

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		SPLSR	
		1	2	3	1+2	1+3	1+2	1+3
UMPC Extremity SAR	Back	1.619	0.719	0.936*	2.338	2.555	N/A	N/A
	Front	1.641	2.585	0.936*	See Note 1	2.577	0.05	N/A
	Top	-	1.714	0.936	1.714	0.936	N/A	N/A
	Bottom	3.141	-	-	3.141	3.141	N/A	N/A
	Right	0.597	2.585*	-	**3.182**	0.597	N/A	N/A

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
UMPC Extremity SAR	Back	1.391	0.719	2.110	N/A
	Front	1.880	2.585	See Note 1	0.08
	Top	-	1.714	1.714	N/A
	Bottom	0.611	-	0.611	N/A
	Right	0.726	2.585*	**3.311**	N/A

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
UMPC Extremity SAR	Back	1.218	0.719	1.937	N/A
	Front	1.582	2.585	See Note 1	0.05
	Top	-	1.714	1.714	N/A
	Bottom	2.668	-	2.668	N/A
	Right	1.105	2.585*	**3.690**	N/A

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	Back	1.168	0.719	1.887
	Front	1.260	2.585	**3.845**
	Top	-	1.714	1.714
	Bottom	2.603	-	2.603
	Right	0.800	2.585*	3.385

Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
UMPC Extremity SAR	Back	0.890	0.719	1.609	N/A
	Front	1.584	2.585	See Note 1	0.07
	Top	-	1.714	1.714	N/A
	Bottom	0.518	-	0.518	N/A
	Right	0.624	2.585*	3.209	N/A

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
UMPC Extremity SAR	Back	1.260	0.719	1.979	N/A
	Front	1.901	2.585	See Note 1	0.07
	Top	-	1.714	1.714	N/A
	Bottom	0.693	-	0.693	N/A
	Right	0.739	2.585*	**3.324**	N/A

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
UMPC Extremity SAR	Back	1.467	0.719	2.186	N/A
	Front	1.438	2.585	See Note 1	0.05
	Top	-	1.714	1.714	N/A
	Bottom	2.972	-	2.972	N/A
	Right	1.224	2.585*	**3.809**	N/A

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		SPLSR	
		1	2	3	1+2	1+3	1+2	1+3
UMPC Extremity SAR	Back	1.886	0.719	0.936*	2.605	2.822	N/A	N/A
	Front	1.680	2.585	0.936*	See Note 1	2.616	0.06	N/A
	Top	-	1.714	0.936	1.714	0.936	N/A	N/A
	Bottom	3.108	-	-	3.108	3.108	N/A	N/A
	Right	0.824	2.585*	-	**3.409**	0.824	N/A	N/A

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	Back	0.793	0.719	1.512
	Front	1.215	2.585	**3.800**
	Top	-	1.714	1.714
	Bottom	2.452	-	2.452
	Right	0.720	2.585*	3.305

Table 12-27
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO (UMPC Extremity)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	GPRS 850	1.393	0.970	2.363
	GPRS 1900	3.141	0.970	See Table Below
	UMTS 850	1.880	0.970	2.850
	UMTS 1750	2.668	0.970	3.638
	UMTS 1900	2.603	0.970	3.573
	LTE Band 12	1.217	0.970	2.187
	LTE Band 13	1.584	0.970	2.554
	LTE Band 26 (Cell)	1.901	0.970	2.871
	LTE Band 66 (AWS)	2.972	0.970	**3.942**
	LTE Band 25 (PCS)	3.108	0.970	See Table Below
	LTE Band 41	2.452	0.970	3.422

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	Back	1.619	0.970*	2.589
	Front	1.641	0.970*	2.611
	Top	-	0.970	0.970
	Bottom	3.141	-	**3.141**
	Right	0.597	0.970*	1.567

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	Back	1.886	0.970*	2.856
	Front	1.680	0.970*	2.650
	Top	-	0.970	0.970
	Bottom	3.108	-	**3.108**
	Right	0.824	0.970*	1.794

Table 12-28
Simultaneous Transmission Scenario with 5 GHz WLAN (UMPC Extremity)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Extremity SAR	GPRS 850	1.393	1.149	1.350	2.542	2.743
	GPRS 1900	3.141	1.149	1.350	See Table Below	See Table Below
	UMTS 850	1.880	1.149	1.350	3.029	3.230
	UMTS 1750	2.668	1.149	1.350	3.817	See Table Below
	UMTS 1900	2.603	1.149	1.350	3.752	**3.953**
	LTE Band 12	1.217	1.149	1.350	2.366	2.567
	LTE Band 13	1.584	1.149	1.350	2.733	2.934
	LTE Band 26 (Cell)	1.901	1.149	1.350	3.050	3.251
	LTE Band 66 (AWS)	2.972	1.149	1.350	See Table Below	See Table Below
	LTE Band 25 (PCS)	3.108	1.149	1.350	See Table Below	See Table Below
	LTE Band 41	2.452	1.149	1.350	3.601	3.802

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Extremity SAR	Back	1.619	0.956	0.812	2.575	2.431
	Front	1.641	1.149	0.538	2.790	2.179
	Top	-	1.149*	1.350	1.149	1.350
	Bottom	3.141	-	-	**3.141**	**3.141**
	Right	0.597	1.149*	-	1.746	0.597

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	Back	1.218	0.812	2.030
	Front	1.582	0.538	2.120
	Top	-	1.350	1.350
	Bottom	2.668	-	**2.668**
	Right	1.105	-	1.105

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Extremity SAR	Back	1.467	0.956	0.812	2.423	2.279
	Front	1.438	1.149	0.538	2.587	1.976
	Top	-	1.149*	1.350	1.149	1.350
	Bottom	2.972	-	-	**2.972**	**2.972**
	Right	1.224	1.149*	-	2.373	1.224

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Extremity SAR	Back	1.886	0.956	0.812	2.842	2.698
	Front	1.680	1.149	0.538	2.829	2.218
	Top	-	1.149*	1.350	1.149	1.350
	Bottom	3.108	-	-	**3.108**	**3.108**
	Right	0.824	1.149*	-	1.973	0.824

Table 12-29
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (UMPC Extremity)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	GPRS 850	1.393	1.785	3.178
	GPRS 1900	3.141	1.785	See Table Below
	UMTS 850	1.880	1.785	3.665
	UMTS 1750	2.668	1.785	See Table Below
	UMTS 1900	2.603	1.785	See Table Below
	LTE Band 12	1.217	1.785	3.002
	LTE Band 13	1.584	1.785	3.369
	LTE Band 26 (Cell)	1.901	1.785	**3.686**
	LTE Band 66 (AWS)	2.972	1.785	See Table Below
	LTE Band 25 (PCS)	3.108	1.785	See Table Below
	LTE Band 41	2.452	1.785	See Table Below

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	Back	1.619	1.568	**3.187**
	Front	1.641	1.330	2.971
	Top	-	1.785	1.785
	Bottom	3.141	-	3.141
	Right	0.597	1.785*	2.382

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	Back	1.218	1.568	2.786
	Front	1.582	1.330	**2.912**
	Top	-	1.785	1.785
	Bottom	2.668	-	2.668
	Right	1.105	1.785*	2.890

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	Back	1.168	1.568	**2.736**
	Front	1.260	1.330	2.590
	Top	-	1.785	1.785
	Bottom	2.603	-	2.603
	Right	0.800	1.785*	2.585

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	Back	1.467	1.568	**3.035**
	Front	1.438	1.330	2.768
	Top	-	1.785	1.785
	Bottom	2.972	-	2.972
	Right	1.224	1.785*	3.009

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	Back	1.886	1.568	**3.454**
	Front	1.680	1.330	3.010
	Top	-	1.785	1.785
	Bottom	3.108	-	3.108
	Right	0.824	1.785*	2.609

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	Back	0.793	1.568	**2.361**
	Front	1.215	1.330	2.545
	Top	-	1.785	1.785
	Bottom	2.452	-	2.452
	Right	0.720	1.785*	2.505

Table 12-30
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (UMPC Extremity)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	GPRS 850	1.393	0.970	0.623	2.986
	GPRS 1900	3.141	0.970	0.623	See Table Below
	UMTS 850	1.880	0.970	0.623	3.473
	UMTS 1750	2.668	0.970	0.623	See Table Below
	UMTS 1900	2.603	0.970	0.623	See Table Below
	LTE Band 12	1.217	0.970	0.623	2.810
	LTE Band 13	1.584	0.970	0.623	3.177
	LTE Band 26 (Cell)	1.901	0.970	0.623	**3.494**
	LTE Band 66 (AWS)	2.972	0.970	0.623	See Table Below
	LTE Band 25 (PCS)	3.108	0.970	0.623	See Table Below
	LTE Band 41	2.452	0.970	0.623	See Table Below

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.619	0.970*	0.623*	**3.212**
	Front	1.641	0.970*	0.453	3.064
	Top	-	0.970	0.623	1.593
	Bottom	3.141	-	-	3.141
	Right	0.597	0.970*	0.623*	2.190

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.218	0.970*	0.623*	2.811
	Front	1.582	0.970*	0.453	**3.005**
	Top	-	0.970	0.623	1.593
	Bottom	2.668	-	-	2.668
	Right	1.105	0.970*	0.623*	2.698

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.168	0.970*	0.623*	**2.761**
	Front	1.260	0.970*	0.453	2.683
	Top	-	0.970	0.623	1.593
	Bottom	2.603	-	-	2.603
	Right	0.800	0.970*	0.623*	2.393

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.467	0.970*	0.623*	**3.060**
	Front	1.438	0.970*	0.453	2.861
	Top	-	0.970	0.623	1.593
	Bottom	2.972	-	-	2.972
	Right	1.224	0.970*	0.623*	2.817

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.886	0.970*	0.623*	**3.479**
	Front	1.680	0.970*	0.453	3.103
	Top	-	0.970	0.623	1.593
	Bottom	3.108	-	-	3.108
	Right	0.824	0.970*	0.623*	2.417

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	0.793	0.970*	0.623*	2.386
	Front	1.215	0.970*	0.453	**2.638**
	Top	-	0.970	0.623	1.593
	Bottom	2.452	-	-	2.452
	Right	0.720	0.970*	0.623*	2.313

Table 12-31
Simultaneous Transmission Scenario with Bluetooth (UMPC Extremity)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	GPRS 850	1.393	0.747	2.140
	GPRS 1900	3.141	0.747	**3.888**
	UMTS 850	1.880	0.747	2.627
	UMTS 1750	2.668	0.747	3.415
	UMTS 1900	2.603	0.747	3.350
	LTE Band 12	1.217	0.747	1.964
	LTE Band 13	1.584	0.747	2.331
	LTE Band 26 (Cell)	1.901	0.747	2.648
	LTE Band 66 (AWS)	2.972	0.747	3.719
	LTE Band 25 (PCS)	3.108	0.747	3.855
	LTE Band 41	2.452	0.747	3.199

Table 12-32
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN Antenna 1 (UMPC Extremity)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	GPRS 850	1.393	1.149	0.747	3.289
	GPRS 1900	3.141	1.149	0.747	See Table Below
	UMTS 850	1.880	1.149	0.747	3.776
	UMTS 1750	2.668	1.149	0.747	See Table Below
	UMTS 1900	2.603	1.149	0.747	See Table Below
	LTE Band 12	1.217	1.149	0.747	3.113
	LTE Band 13	1.584	1.149	0.747	3.480
	LTE Band 26 (Cell)	1.901	1.149	0.747	**3.797**
	LTE Band 66 (AWS)	2.972	1.149	0.747	See Table Below
	LTE Band 25 (PCS)	3.108	1.149	0.747	See Table Below
	LTE Band 41	2.452	1.149	0.747	See Table Below

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.619	0.956	0.248	2.823
	Front	1.641	1.149	0.747	**3.537**
	Top	-	1.149*	0.604	1.753
	Bottom	3.141	-	-	3.141
	Right	0.597	1.149*	0.212	1.958

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.218	0.956	0.248	2.422
	Front	1.582	1.149	0.747	**3.478**
	Top	-	1.149*	0.604	1.753
	Bottom	2.668	-	-	2.668
	Right	1.105	1.149*	0.212	2.466

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.168	0.248	0.956	2.372
	Front	1.260	0.747	1.149	**3.156**
	Top	-	0.604	1.149*	1.753
	Bottom	2.603	-	-	2.603
	Right	0.800	0.212	1.149*	2.161

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.467	0.956	0.248	2.671
	Front	1.438	1.149	0.747	**3.334**
	Top	-	1.149*	0.604	1.753
	Bottom	2.972	-	-	2.972
	Right	1.224	1.149*	0.212	2.585

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.886	0.956	0.248	3.090
	Front	1.680	1.149	0.747	**3.576**
	Top	-	1.149*	0.604	1.753
	Bottom	3.108	-	-	3.108
	Right	0.824	1.149*	0.212	2.185

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	0.793	0.956	0.248	1.997
	Front	1.215	1.149	0.747	**3.111**
	Top	-	1.149*	0.604	1.753
	Bottom	2.452	-	-	2.452
	Right	0.720	1.149*	0.212	2.081

Table 12-33
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN Antenna 2 (UMPC Extremity)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	GPRS 850	1.393	1.350	0.747	3.490
	GPRS 1900	3.141	1.350	0.747	See Table Below
	UMTS 850	1.880	1.350	0.747	**3.977**
	UMTS 1750	2.668	1.350	0.747	See Table Below
	UMTS 1900	2.603	1.350	0.747	See Table Below
	LTE Band 12	1.217	1.350	0.747	3.314
	LTE Band 13	1.584	1.350	0.747	3.681
	LTE Band 26 (Cell)	1.901	1.350	0.747	See Table Below
	LTE Band 66 (AWS)	2.972	1.350	0.747	See Table Below
	LTE Band 25 (PCS)	3.108	1.350	0.747	See Table Below
	LTE Band 41	2.452	1.350	0.747	See Table Below

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.619	0.812	0.248	2.679
	Front	1.641	0.538	0.747	2.926
	Top	-	1.350	0.604	1.954
	Bottom	3.141	-	-	**3.141**
	Right	0.597	-	0.212	0.809

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.218	0.812	0.248	2.278
	Front	1.582	0.538	0.747	**2.867**
	Top	-	1.350	0.604	1.954
	Bottom	2.668	-	-	2.668
	Right	1.105	-	0.212	1.317

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.168	0.812	0.248	2.228
	Front	1.260	0.538	0.747	2.545
	Top	-	1.350	0.604	1.954
	Bottom	2.603	-	-	**2.603**
	Right	0.800	-	0.212	1.012

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.260	0.812	0.248	2.320
	Front	1.901	0.538	0.747	**3.186**
	Top	-	1.350	0.604	1.954
	Bottom	0.693	-	-	0.693
	Right	0.739	-	0.212	0.951

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.467	0.812	0.248	2.527
	Front	1.438	0.538	0.747	2.723
	Top	-	1.350	0.604	1.954
	Bottom	2.972	-	-	**2.972**
	Right	1.224	-	0.212	1.436

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.886	0.812	0.248	2.946
	Front	1.680	0.538	0.747	2.965
	Top	-	1.350	0.604	1.954
	Bottom	3.108	-	-	**3.108**
	Right	0.824	-	0.212	1.036

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	0.793	0.812	0.248	1.853
	Front	1.215	0.538	0.747	**2.500**
	Top	-	1.350	0.604	1.954
	Bottom	2.452	-	-	2.452
	Right	0.720	-	0.212	0.932

Table 12-34
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN MIMO (UMPC Extremity)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	GPRS 850	1.393	1.785	0.747	**3.925**
	GPRS 1900	3.141	1.785	0.747	See Table Below
	UMTS 850	1.880	1.785	0.747	See Table Below
	UMTS 1750	2.668	1.785	0.747	See Table Below
	UMTS 1900	2.603	1.785	0.747	See Table Below
	LTE Band 12	1.217	1.785	0.747	3.749
	LTE Band 13	1.584	1.785	0.747	See Table Below
	LTE Band 26 (Cell)	1.901	1.785	0.747	See Table Below
	LTE Band 66 (AWS)	2.972	1.785	0.747	See Table Below
	LTE Band 25 (PCS)	3.108	1.785	0.747	See Table Below
	LTE Band 41	2.452	1.785	0.747	See Table Below

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.619	1.568	0.248	3.435
	Front	1.641	1.330	0.747	**3.718**
	Top	-	1.785	0.604	2.389
	Bottom	3.141	-	-	3.141
	Right	0.597	1.785*	0.212	2.594

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.391	1.568	0.248	3.207
	Front	1.880	1.330	0.747	**3.957**
	Top	-	1.785	0.604	2.389
	Bottom	0.611	-	-	0.611
	Right	0.726	1.785*	0.212	2.723

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.218	1.568	0.248	3.034
	Front	1.582	1.330	0.747	**3.659**
	Top	-	1.785	0.604	2.389
	Bottom	2.668	-	-	2.668
	Right	1.105	1.785*	0.212	3.102

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.168	1.568	0.248	2.984
	Front	1.260	1.330	0.747	**3.337**
	Top	-	1.785	0.604	2.389
	Bottom	2.603	-	-	2.603
	Right	0.800	1.785*	0.212	2.797

Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	0.890	1.568	0.248	2.706
	Front	1.584	1.330	0.747	**3.661**
	Top	-	1.785	0.604	2.389
	Bottom	0.518	-	-	0.518
	Right	0.624	1.785*	0.212	2.621

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.260	1.568	0.248	3.076
	Front	1.901	1.330	0.747	**3.978**
	Top	-	1.785	0.604	2.389
	Bottom	0.693	-	-	0.693
	Right	0.739	1.785*	0.212	2.736

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.467	1.568	0.248	3.283
	Front	1.438	1.330	0.747	**3.515**
	Top	-	1.785	0.604	2.389
	Bottom	2.972	-	-	2.972
	Right	1.224	1.785*	0.212	3.221

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	1.886	1.568	0.248	3.702
	Front	1.680	1.330	0.747	**3.757**
	Top	-	1.785	0.604	2.389
	Bottom	3.108	-	-	3.108
	Right	0.824	1.785*	0.212	2.821

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	Back	0.793	1.568	0.248	2.609
	Front	1.215	1.330	0.747	**3.292**
	Top	-	1.785	0.604	2.389
	Bottom	2.452	-	-	2.452
	Right	0.720	1.785*	0.212	2.717

Notes:

1. No evaluation was performed to determine the aggregate 10g SAR for these configurations as the SPLS ratio between the antenna pairs was not greater than 0.10 per FCC KDB 447498 D01v06. See Section 12.9 for detailed SPLS ratio analysis.

12.9 SPLSR Evaluation and Analysis

Per FCC KDB Publication 447498 D01v06, when the sum of the standalone transmitters is more than 1.6 W/kg for 1g and 4 W/kg for 10g, the SAR sum to peak locations can be analyzed to determine SAR distribution overlaps. When the SAR peak to location ratio (shown below) for each pair of antennas is ≤ 0.04 for 1g and ≤0.10 for 10g, simultaneous SAR evaluation is not required. The distance between the transmitters was calculated using the following formula.

$$\text{Distance}_{Tx1-Tx2} = R_i = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2} \text{ (Mini-Tablet)}$$

$$\text{SPLS Ratio} = \frac{(SAR_1 + SAR_2)^{1.5}}{R_i}$$

12.9.1 Back Side UMPC Body SPLSR Evaluation and Analysis

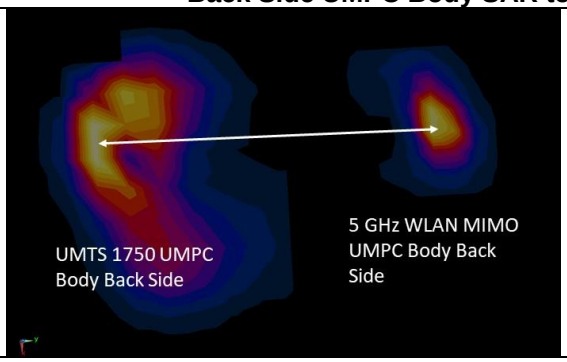
Table 12-35
Peak SAR Locations for Back Side UMPC Body

Mode/Band	x (mm)	y (mm)
5 GHz WLAN MIMO	-46.00	72.00
5 GHz WLAN Ant 1	-51.00	71.00
Bluetooth	-84.60	68.40
UMTS 1750	-84.60	-87.00
LTE Band 66 (AWS)	-55.50	-87.50

Table 12-36
Back Side UMPC Body SAR to Peak Location Separation Ratio Calculations

Antenna Pair		Standalone SAR (W/kg)		Standalone SAR Sum (W/kg)	Peak SAR Separation Distance (mm)	SPLS Ratio	Plot Number
Ant "a"	Ant "b"	a	b	a+b	D_{a-b}	$(a+b)^{1.5}/D_{a-b}$	
5 GHz WLAN MIMO	UMTS 1750	0.829	0.978	1.807	163.62	0.01	1
5 GHz WLAN MIMO	LTE Band 66 (AWS)	0.829	0.804	1.633	159.78	0.01	2
5 GHz WLAN Ant 1	UMTS 1750	0.574	0.978	1.552	161.53	0.01	3
Bluetooth	UMTS 1750	0.068	0.978	1.046	155.40	0.01	
5 GHz WLAN Ant 1	Bluetooth	0.574	0.068	0.642	33.70	0.02	
5 GHz WLAN MIMO	UMTS 1750	0.829	0.978	1.807	163.62	0.01	4
Bluetooth	UMTS 1750	0.068	0.978	1.046	155.40	0.01	
5 GHz WLAN MIMO	Bluetooth	0.829	0.068	0.897	38.77	0.02	
5 GHz WLAN MIMO	LTE Band 66 (AWS)	0.829	0.804	1.633	159.78	0.01	5
Bluetooth	LTE Band 66 (AWS)	0.068	0.804	0.872	158.59	0.01	
5 GHz WLAN MIMO	Bluetooth	0.829	0.068	0.897	38.77	0.02	

Table 12-37
Back Side UMPC Body SAR to Peak Location Separation Ratio Plots



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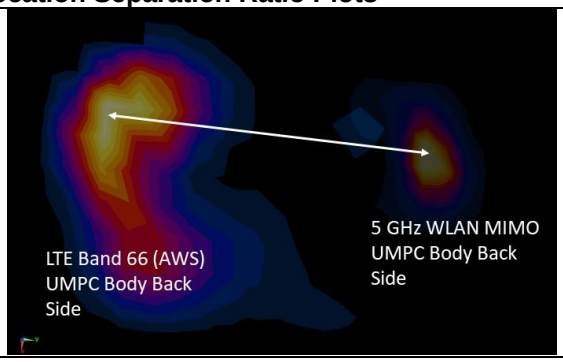

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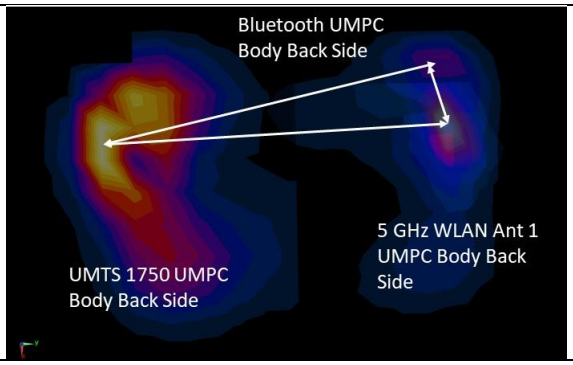

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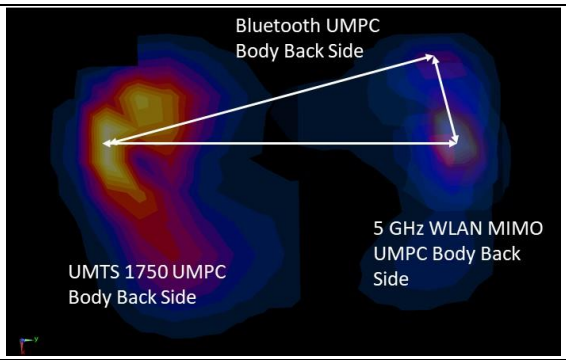

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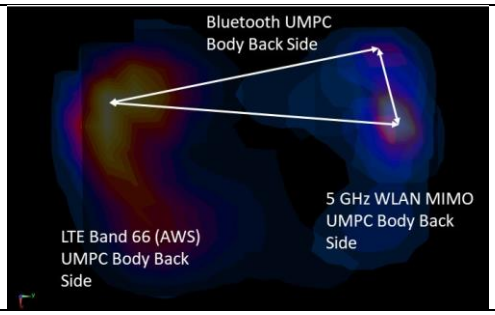

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12.9.2 Front Side UMPC Body SPLSR Evaluation and Analysis

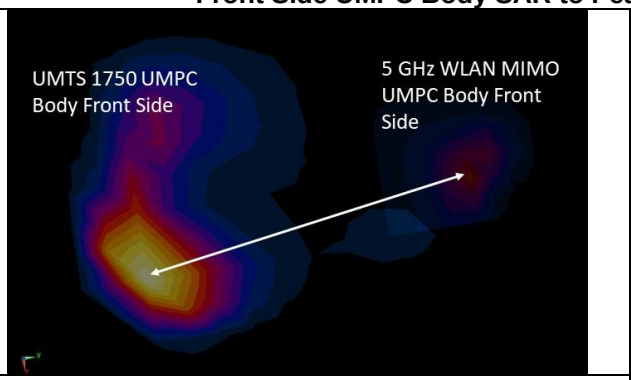
Table 12-38
Peak SAR Locations for Front Side UMPC Body

Mode/Band	x (mm)	y (mm)
5 GHz WLAN MIMO	7.00	75.00
5 GHz WLAN Ant 1	7.00	69.00
Bluetooth	31.80	64.60
UMTS 1750	31.80	-87.00
LTE Band 66 (AWS)	10.00	-89.00

Table 12-39
Front Side UMPC Body SAR to Peak Location Separation Ratio Calculations

Antenna Pair		Standalone SAR (W/kg)		Standalone SAR Sum (W/kg)	Peak SAR Separation Distance (mm)	SPLS Ratio	Plot Number
Ant "a"	Ant "b"	a	b	a+b	D_{a-b}	$(a+b)^{1.5}/D_{a-b}$	
5 GHz WLAN MIMO	UMTS 1750	0.549	1.162	1.711	163.89	0.01	1
5 GHz WLAN MIMO	LTE Band 66 (AWS)	0.549	1.106	1.655	164.03	0.01	2
5 GHz WLAN Ant 1	UMTS 1750	0.430	1.162	1.592	157.96	0.01	3
Bluetooth	UMTS 1750	0.124	1.162	1.286	151.60	0.01	
5 GHz WLAN Ant 1	Bluetooth	0.430	0.124	0.554	25.19	0.02	
5 GHz WLAN Ant 1	LTE Band 66 (AWS)	0.430	1.106	1.536	158.03	0.01	4
Bluetooth	LTE Band 66 (AWS)	0.124	1.106	1.23	155.14	0.01	
5 GHz WLAN Ant 1	Bluetooth	0.430	0.124	0.554	25.19	0.02	
5 GHz WLAN MIMO	UMTS 1750	0.549	1.162	1.711	163.89	0.01	5
Bluetooth	UMTS 1750	0.124	1.162	1.286	151.60	0.01	
5 GHz WLAN MIMO	Bluetooth	0.549	0.124	0.673	26.89	0.02	
5 GHz WLAN MIMO	LTE Band 66 (AWS)	0.549	1.106	1.655	164.03	0.01	6
Bluetooth	LTE Band 66 (AWS)	0.124	1.106	1.23	155.14	0.01	
5 GHz WLAN MIMO	Bluetooth	0.549	0.124	0.673	26.89	0.02	

Table 12-40
Front Side UMPC Body SAR to Peak Location Separation Ratio Plots



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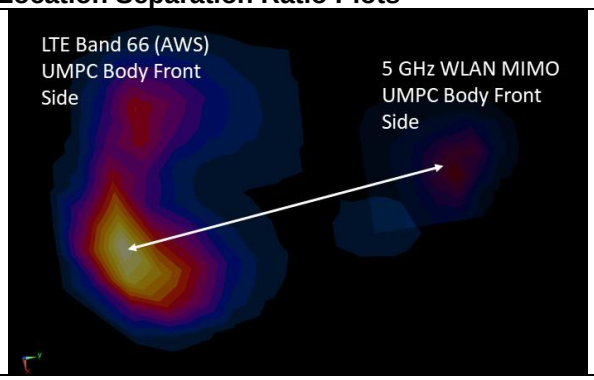

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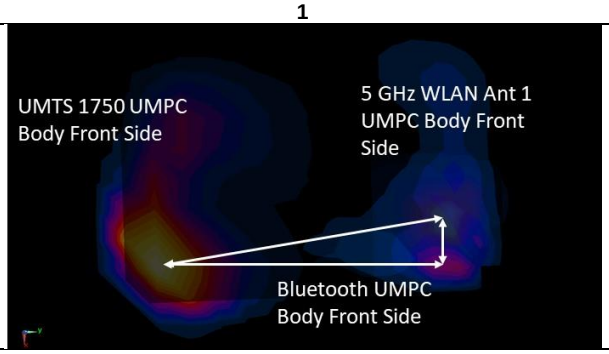

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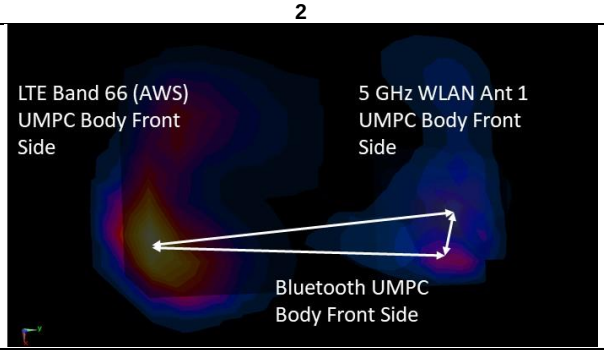

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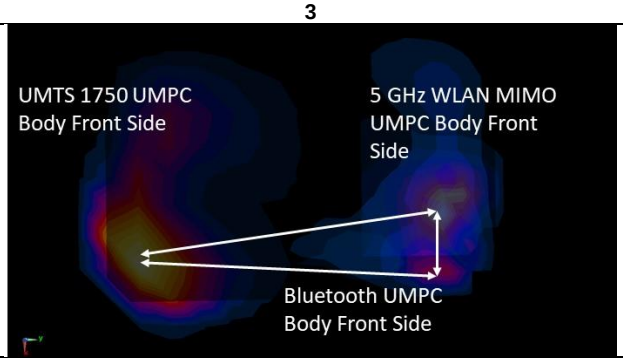

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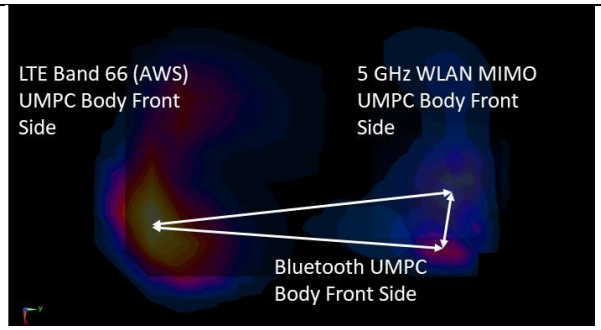

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12.9.3 Front Side UMPC Extremity SPLSR Evaluation and Analysis

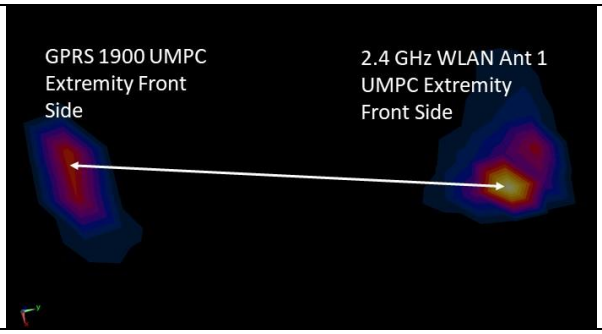
Table 12-41
Peak SAR Locations for Front Side UMPC Extremity

Mode/Band	x (mm)	y (mm)
2.4 GHz WLAN Ant 1	27.80	76.40
GPRS 1900	-5.50	-80.00
UMTS 850	27.00	-38.00
UMTS 1750	27.00	-81.00
LTE Band 13	7.00	-49.50
LTE Band 66 (AWS)	10.00	-89.00
LTE Band 25 (PCS)	-1.00	-81.00
LTE Band 26 (Cell)	29.50	-62.50

Table 12-42
Front Side UMPC Extremity SAR to Peak Location Separation Ratio Calculations

Antenna Pair		Standalone SAR (W/kg)		Standalone SAR Sum (W/kg)	Peak SAR Separation Distance (mm)	SPLS Ratio	Plot Number
Ant "a"	Ant "b"	a	b	a+b	D_{a-b}	$(a+b)^{1.5}/D_{a-b}$	
2.4 GHz WLAN Ant 1	GPRS 1900	2.585	1.641	4.226	159.91	0.05	1
2.4 GHz WLAN Ant 1	UMTS 850	2.585	1.880	4.465	114.40	0.08	2
2.4 GHz WLAN Ant 1	UMTS 1750	2.585	1.582	4.167	157.40	0.05	3
2.4 GHz WLAN Ant 1	LTE Band 13	2.585	1.584	4.169	127.61	0.07	4
2.4 GHz WLAN Ant 1	LTE Band 26 (Cell)	2.585	1.901	4.486	138.91	0.07	5
2.4 GHz WLAN Ant 1	LTE Band 66 (AWS)	2.585	1.438	4.023	166.36	0.05	6
2.4 GHz WLAN Ant 1	LTE Band 25 (PCS)	2.585	1.680	4.265	160.01	0.06	7

Table 12-43
Front Side UMPC Body SAR to Peak Location Separation Ratio Plots



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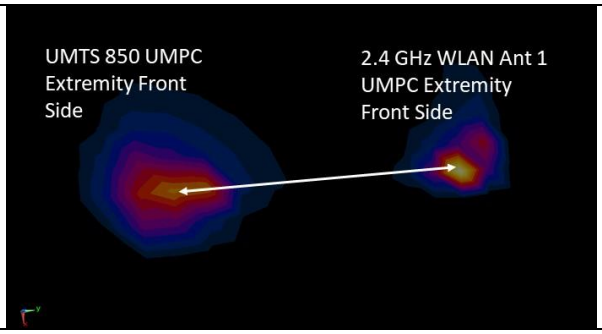

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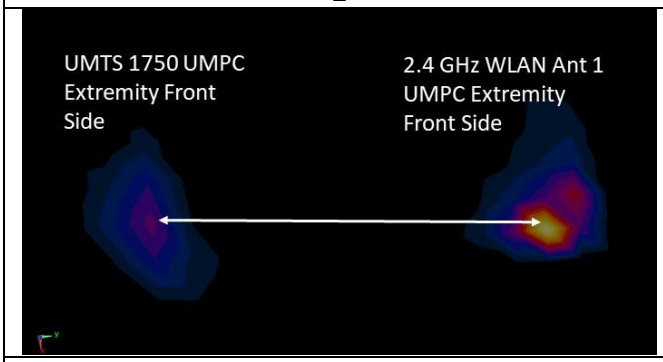

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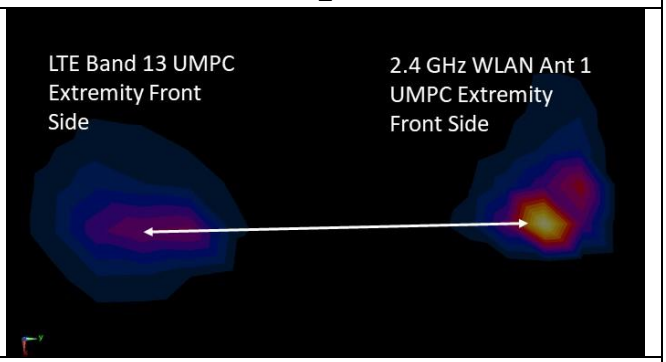

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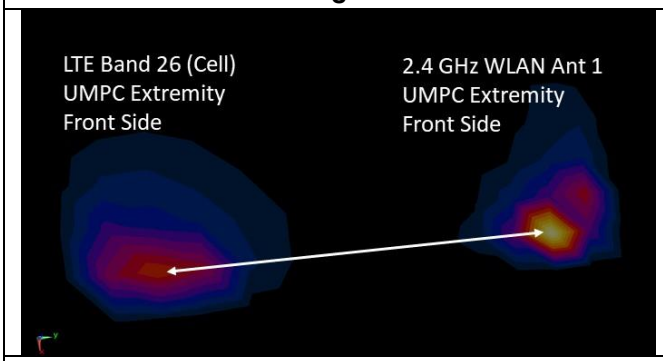

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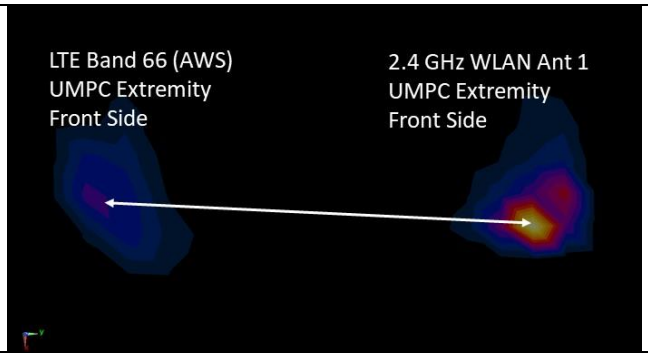

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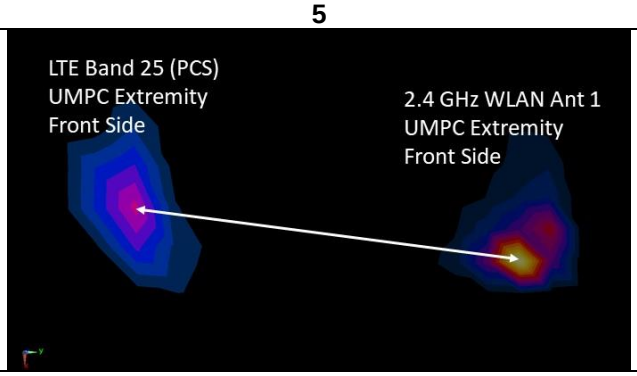

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12.10 Simultaneous Transmission Conclusion

The above numerical summed SAR results and SPLSR analysis are sufficient to determine that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE 1528- 2013 Section 6.3.4.1.

13 SAR MEASUREMENT VARIABILITY

13.1 Measurement Variability

Per FCC KDB Publication 865664 D01v01r04, SAR measurement variability was assessed for each frequency band, which was determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media were required for SAR measurements in a frequency band, the variability measurement procedures were applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. These additional measurements were repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement Variability was assessed using the following procedures for each frequency band:

1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.
2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1g SAR limit).
3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg
5) When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

Table 13-1
1g UMPC Body SAR Measurement Variability Results

BODY VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Configuration	Side	Spacing	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	Ratio	3rd Repeated SAR (1g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1752.60	1513	UMTS 1750	RMC	Open	front	10 mm	1.110	1.030	1.08	N/A	N/A	N/A	N/A
1900	1905.00	26590	LTE Band 25 (PCS), 20 MHz Bandwidth	QPSK, 1 RB, 99 RB Offset	Open	bottom	13 mm	0.935	0.884	1.06	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Body/UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 13-2
10g UMPC Extremity SAR Measurement Variability Results

PHABLET VARIABILITY RESULTS															
Band	FREQUENCY		Mode	Service	Configuration	Data Rate (Mbps)	Side	Spacing	Measured SAR (10g)	1st Repeated SAR (10g)	Ratio	2nd Repeated SAR (10g)	Ratio	3rd Repeated SAR (10g)	Ratio
	MHz	Ch.							(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1770.00	132572	LTE Band 66 (AWS), 20 MHz Bandwidth	QPSK, 50 RB, 0 RB Offset	Open	N/A	bottom	0 mm	2.870	2.830	1.01	N/A	N/A	N/A	N/A
1900	1882.50	26365	LTE Band 25 (PCS), 20 MHz Bandwidth	QPSK, 50 RB, 50 RB Offset	Open	N/A	bottom	0 mm	2.850	2.860	1.00	N/A	N/A	N/A	N/A
2600	2680.00	41490	LTE Band 41, 20 MHz Bandwidth	QPSK, 50 RB, 0 RB Offset	Open	N/A	bottom	0 mm	2.320	2.280	1.02	N/A	N/A	N/A	N/A
2450	2437.00	6	802.11b, 22 MHz Bandwidth	DSSS , ANT 1	Open	1	front	0 mm	2.480	2.440	1.02	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**									**Phablet/UMPC Extremity** **4.0 W/kg (mW/g)** averaged over 10 grams						

13.2 Measurement Uncertainty

The measured SAR was <1.5 W/kg for 1g and <3.75 W/kg for 10g for all frequency bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE 1528-2013 was not required.

14 ADDITIONAL TESTING PER FCC GUIDANCE

14.1 Tuner Testing

The following test procedures were followed to demonstrate that the SAR results in Section 11 represented the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR was measured according to the required FCC SAR test procedures with the dynamic tuner active to allow the device to automatically tune to the antenna state for the respective RF exposure test configurations. Additional single point SAR time-sweep measurements were evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values. The additional tuner hardware has no influence on the antenna characteristics, other than impedance matching.

To evaluate all the tuner states, the 60 tuner states were divided among the aggregate band, mode and exposure combinations so that each combination was evaluated for at least 20 tuner states and also so that at least 3 single point SAR measurements were made for every available tuner state. Single point time-sweep measurements were performed at the peak SAR location determined by the zoom scan of the configuration with the highest reported SAR for each combination. The tuner state was able to be established remotely so that the device was not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe remained stationary at the same position throughout the entire series of single point measurements for each combination. When the single point SAR or 1g SAR was > 1.2 W/kg for a particular band/mode/exposure condition, point SAR measurements were made for all 60 states.

The operational description contains more information about the design and implementation of the dynamic antenna tuning.

Table 14-1
Supplemental Head SAR Data

Supplemental Head SAR Data							
UMTS 850		LTE Band 12		LTE Band 13		LTE Band 26	
RMC		QPSK, 10MHz Bandwidth, 1 RB, 25 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 15MHz Bandwidth, 1 RB, 0 RB Offsets	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek
Frequency (MHz)	836.60	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	831.50
Channel	4183	Channel	23095	Channel	23230	Channel	26865
Measured 1g SAR (W/kg)	0.353	Measured 1g SAR (W/kg)	0.156	Measured 1g SAR (W/kg)	0.186	Measured 1g SAR (W/kg)	0.288
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 1)	0.478	Auto-tune (State 26)	0.279	Auto-tune (State 27)	0.284	Auto-tune (State 17)	0.396
Default (State 0)	0.470	Default (State 18)	0.175	Default (State 26)	0.261	Default (State 0)	0.370
State 0	0.470	State 4	0.189	State 0	0.163	State 0	0.370
State 1	0.469	State 7	0.224	State 2	0.204	State 2	0.395
State 4	0.451	State 9	0.263	State 8	0.248	State 5	0.397
State 7	0.432	State 11	0.237	State 10	0.280	State 12	0.338
State 9	0.405	State 13	0.116	State 15	0.195	State 14	0.267
State 12	0.296	State 18	0.175	State 16	0.180	State 17	0.391
State 13	0.262	State 20	0.186	State 17	0.179	State 21	0.371
State 14	0.219	State 23	0.217	State 19	0.210	State 22	0.365
State 17	0.459	State 24	0.227	State 21	0.214	State 24	0.359
State 19	0.417	State 25	0.255	State 22	0.222	State 25	0.346
State 20	0.414	State 26	0.279	State 26	0.261	State 26	0.328
State 21	0.409	State 27	0.276	State 27	0.272	State 28	0.271
State 23	0.385	State 29	0.178	State 30	0.251	State 34	0.269
State 26	0.320	State 32	0.047	State 32	0.073	State 38	0.285
State 28	0.240	State 33	0.046	State 34	0.120	State 40	0.287
State 30	0.172	State 34	0.073	State 37	0.135	State 41	0.279
State 32	0.318	State 37	0.073	State 39	0.144	State 42	0.255
State 37	0.388	State 40	0.061	State 42	0.107	State 43	0.217
State 41	0.388	State 42	0.031	State 43	0.081	State 44	0.157
State 43	0.317	State 44	0.012	State 45	0.036	State 46	0.085
State 51	0.468	State 46	0.005	State 47	0.014	State 48	0.370
State 53	0.317	State 48	0.117	State 49	0.178	State 49	0.374
State 54	0.465	State 50	0.046	State 50	0.071	State 52	0.375
State 55	0.457	State 54	0.117	State 55	0.177	State 56	0.210
State 57	0.468	State 55	0.125	State 56	0.072	State 58	0.376

Table 14-2
Supplemental Body SAR Data

Supplemental Body SAR Data							
UMTS 850		LTE Band 12		LTE Band 13		LTE Band 26	
RMC		QPSK, 10MHz Bandwidth, 1 RB, 25 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 15MHz Bandwidth, 1 RB, 0 RB Offsets	
Test Position	Back Side Open Configuration	Test Position	Back Side Closed Configuration	Test Position	Back Side Closed Configuration	Test Position	Right Edge Closed Configuration
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	846.60	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	831.50
Channel	4233	Channel	23095	Channel	23230	Channel	26865
Measured 1g SAR (W/kg)	0.564	Measured 1g SAR (W/kg)	0.235	Measured 1g SAR (W/kg)	0.313	Measured 1g SAR (W/kg)	0.500
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 12)	1.029	Auto-tune (State 25)	0.397	Auto-tune (State 11)	0.575	Auto-tune (State 2)	0.762
Default (State 0)	0.662	Default (State 18)	0.289	Default (State 26)	0.487	Default (State 0)	0.691
State 0	0.662	State 3	0.303	State 0	0.301	State 0	0.691
State 1	0.655	State 5	0.321	State 1	0.300	State 2	0.755
State 3	0.804	State 8	0.379	State 3	0.395	State 3	0.762
State 6	0.861	State 9	0.392	State 5	0.409	State 4	0.762
State 7	0.880	State 10	0.326	State 6	0.437	State 6	0.766
State 8	0.899	State 14	0.061	State 11	0.564	State 12	0.363
State 10	1.017	State 18	0.289	State 15	0.286	State 15	0.348
State 11	1.049	State 20	0.305	State 18	0.354	State 16	0.716
State 12	1.030	State 21	0.315	State 26	0.487	State 18	0.740
State 13	0.956	State 24	0.370	State 27	0.516	State 23	0.722
State 16	0.707	State 25	0.397	State 31	0.327	State 29	0.498
State 19	0.799	State 26	0.386	State 35	0.226	State 31	0.324
State 21	0.812	State 29	0.152	State 38	0.246	State 35	0.492
State 22	0.832	State 30	0.098	State 40	0.244	State 36	0.493
State 25	0.887	State 33	0.085	State 41	0.222	State 39	0.503
State 28	0.940	State 36	0.098	State 45	0.063	State 41	0.480
State 31	0.702	State 38	0.077	State 46	0.042	State 42	0.428
State 33	0.313	State 40	0.063	State 47	0.024	State 45	0.194
State 35	0.405	State 44	0.011	State 50	0.126	State 49	0.701
State 36	0.408	State 47	0.003	State 51	0.270	State 52	0.709
State 39	0.420	State 51	0.192	State 52	0.296	State 53	0.681
State 48	0.650	State 57	0.195	State 53	0.130	State 54	0.388
State 57	0.660	State 58	0.194	State 57	0.270	State 56	0.394
State 58	0.705	State 59	0.085	State 59	0.130	State 59	0.395

15 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	85033E	3.5mm Standard Calibration Kit	8/13/2018	Annual	8/13/2019	MY53402352
Agilent	8594A	(9kHz-2.9GHz) Spectrum Analyzer	N/A	N/A	N/A	3051A00187
Agilent	8753E	(30kHz-6GHz) Network Analyzer	9/28/2018	Annual	9/28/2019	JP38020182
Agilent	8753ES	S-Parameter Network Analyzer	7/30/2018	Annual	7/30/2019	MY40000670
Agilent	8753ES	S-Parameter Vector Network Analyzer	8/30/2018	Annual	8/30/2019	MY40003841
Agilent	E4438C	ESG Vector Signal Generator	3/11/2019	Biennial	3/11/2021	MY42082659
Agilent	E4440A	PSA Series Spectrum Analyzer	11/14/2018	Annual	11/14/2019	MY46186272
Agilent	E5515C	8960 Series 10 Wireless Communications Test Set	12/18/2018	Annual	12/18/2019	GB42230325
Agilent	E5515C	Wireless Communications Test Set	2/28/2018	Biennial	2/28/2020	GB41450275
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB44450273
Agilent	N5182A	MXG Vector Signal Generator	6/15/2018	Annual	6/15/2019	MY47420837
Agilent	N9020A	MXA Signal Analyzer	4/20/2019	Annual	4/20/2020	US46470561
Amplifier Research	150A100C	Amplifier	CBT	N/A	CBT	350132
Amplifier Research	150A100C	DC Amplifier	CBT	N/A	CBT	348812
Anritsu	MA24106A	USB Power Sensor	7/17/2018	Annual	7/17/2019	1827527
Anritsu	MA24106A	USB Power Sensor	6/5/2018	Annual	6/5/2019	1231535
Anritsu	MA2411B	Pulse Power Sensor	10/30/2018	Annual	10/30/2019	1126066
Anritsu	MA2411B	Pulse Power Sensor	10/30/2018	Annual	10/30/2019	1207470
Anritsu	ML2495A	Power Meter	10/21/2018	Annual	10/21/2019	941001
Anritsu	MT8000A	Radio Communication Test Station	11/14/2018	Annual	11/14/2019	6261914237
Anritsu	MT8820C	Radio Communication Analyzer	6/27/2018	Annual	6/27/2019	6201240328
Anritsu	MT8862A	Wireless Connectivity Test Set	7/3/2018	Annual	7/3/2019	6261782395
COMTech	AR85729-5	Solid State Amplifier	CBT	N/A	CBT	M1S5A00-009
COMTECH	AR85729-5/5759B	Solid State Amplifier	CBT	N/A	CBT	M3W1A00-1002
Control Company	4040	Therm./ Clock/ Humidity Monitor	1/8/2019	Annual	1/8/2020	160473909
Control Company	4352	Ultra Long Stem Thermometer	2/28/2018	Biennial	2/28/2020	170330160
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	6/4/2018	Annual	6/4/2019	MY53401181
Keysight Technologies	AT/N6705B	DC Power Supply	CBT	N/A	CBT	MY53001315
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
Mini Circuits	PWR-SEN-4GHS	USB Power Sensor	4/19/2019	Annual	4/19/2020	11401010036
MiniCircuits	SLP-2400+	Low Pass Filter	CBT	N/A	CBT	R8979500903
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Mitutoyo	CD-6"CSX	Digital Caliper	4/18/2018	Biennial	4/18/2020	13264165
Narda	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Pasternack	NC-100	Torque Wrench	11/1/2017	Biennial	11/1/2019	N/A
Pasternack	PE2208-6	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	PE5011-1	Torque Wrench	7/19/2017	Biennial	7/19/2019	N/A
Rohde & Schwarz	CMW500	Radio Communication Tester	6/8/2018	Annual	6/8/2019	112347
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	10/30/2018	Annual	10/30/2019	164948
Seekonk	NC-100	Torque Wrench 5/16", 8" lbs	7/11/2018	Annual	7/11/2019	N/A
Seekonk	NC-100	Torque Wrench	7/11/2018	Annual	7/11/2019	N/A
Seekonk	NC-100	Torque Wrench (8" lb)	5/10/2018	Biennial	5/10/2020	21053
SPEAG	DAK-3.5	Dielectric Assessment Kit	9/11/2018	Annual	9/11/2019	1091
SPEAG	D750V3	750 MHz SAR Dipole	10/19/2018	Annual	10/19/2019	1161
SPEAG	D835V2	835 MHz SAR Dipole	1/22/2019	Annual	1/22/2020	4d132
SPEAG	D1765V2	1765 MHz SAR Dipole	5/23/2018	Annual	5/23/2019	1008
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Annual	10/23/2019	5d149
SPEAG	D2450V2	2450 MHz SAR Dipole	8/16/2018	Annual	8/16/2019	981
SPEAG	D2600V2	2600 MHz SAR Dipole	6/7/2017	Biennial	6/7/2019	1064
SPEAG	D5GHzV2	5 GHz SAR Dipole	9/21/2016	Triennial	9/21/2019	1191
SPEAG	D1750V2	1750 MHz SAR Dipole	5/9/2017	Biennial	5/9/2019	1148
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Annual	10/23/2019	5d080
SPEAG	D1900V2	1900 MHz SAR Dipole	2/21/2019	Annual	2/21/2020	5d148
SPEAG	D2450V2	2450 MHz SAR Dipole	8/17/2017	Biennial	8/17/2019	719
SPEAG	D2450V2	2450 MHz SAR Dipole	9/11/2017	Biennial	9/11/2019	797
SPEAG	D2600V2	2600 MHz SAR Dipole	4/11/2018	Biennial	4/11/2020	1004
SPEAG	D5GHzV2	5 GHz SAR Dipole	1/16/2018	Biennial	1/16/2020	1057
SPEAG	EX3DV4	SAR Probe	2/19/2019	Annual	2/19/2020	3914
SPEAG	EX3DV4	SAR Probe	6/25/2018	Annual	6/25/2019	7409
SPEAG	EX3DV4	SAR Probe	7/20/2018	Annual	7/20/2019	7410
SPEAG	EX3DV4	SAR Probe	1/25/2019	Annual	1/25/2020	3589
SPEAG	EX3DV4	SAR Probe	1/24/2019	Annual	1/24/2020	7488
SPEAG	EX3DV4	SAR Probe	4/24/2019	Annual	4/24/2020	7357
SPEAG	EX3DV4	SAR Probe	8/23/2018	Annual	8/23/2019	7308
SPEAG	EX3DV4	SAR Probe	2/19/2019	Annual	2/19/2020	7417
SPEAG	EX3DV4	SAR Probe	5/16/2019	Annual	5/16/2020	7406
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/14/2019	Annual	2/14/2020	1272
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/18/2018	Annual	6/18/2019	1334
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/11/2018	Annual	7/11/2019	1322
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/22/2018	Annual	8/22/2019	1450
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/15/2019	Annual	1/15/2020	1530
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/18/2019	Annual	4/18/2020	1407
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/3/2018	Annual	10/3/2019	1558
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/13/2019	Annual	2/13/2020	665
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/8/2019	Annual	5/8/2020	859

All equipment was used solely within its calibration period.

Note: CBT (Calibrated Before Testing). Prior to testing, the measurement paths containing a cable, amplifier, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.

16 MEASUREMENT UNCERTAINTIES

a	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	**Tol. (± %)**	**Prob. Dist.**	**Div.**	**c_i 1gm**	**c_i 10 gms**	**1gm u_i (± %)**	**10gms u_i (± %)**	**v_i**
Measurement System								
Probe Calibration	6.55	N	1	1.0	1.0	6.6	6.6	∞
Axial Isotropy	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	2.0	R	1.73	1.0	1.0	1.2	1.2	∞
Linearity	0.3	N	1	1.0	1.0	0.3	0.3	∞
System Detection Limits	0.25	R	1.73	1.0	1.0	0.1	0.1	∞
Readout Electronics	0.3	N	1	1.0	1.0	0.3	0.3	∞
Response Time	0.8	R	1.73	1.0	1.0	0.5	0.5	∞
Integration Time	2.6	R	1.73	1.0	1.0	1.5	1.5	∞
RF Ambient Conditions - Noise	3.0	R	1.73	1.0	1.0	1.7	1.7	∞
RF Ambient Conditions - Reflections	3.0	R	1.73	1.0	1.0	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	0.4	R	1.73	1.0	1.0	0.2	0.2	∞
Probe Positioning w/ respect to Phantom	6.7	R	1.73	1.0	1.0	3.9	3.9	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	4.0	R	1.73	1.0	1.0	2.3	2.3	∞
Test Sample Related								
Test Sample Positioning	2.7	N	1	1.0	1.0	2.7	2.7	35
Device Holder Uncertainty	1.67	N	1	1.0	1.0	1.7	1.7	5
Output Power Variation - SAR drift measurement	5.0	R	1.73	1.0	1.0	2.9	2.9	∞
SAR Scaling	0.0	R	1.73	1.0	1.0	0.0	0.0	∞
Phantom & Tissue Parameters								
Phantom Uncertainty (Shape & Thickness tolerances)	7.6	R	1.73	1.0	1.0	4.4	4.4	∞
Liquid Conductivity - measurement uncertainty	4.2	N	1	0.78	0.71	3.3	3.0	10
Liquid Permittivity - measurement uncertainty	4.1	N	1	0.23	0.26	1.0	1.1	10
Liquid Conductivity - Temperature Uncertainty	3.4	R	1.73	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Unceritainty	0.6	R	1.73	0.23	0.26	0.1	0.1	∞
Liquid Conductivity - deviation from target values	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Permittivity - deviation from target values	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Combined Standard Uncertainty (k=1)		RSS				11.5	11.3	60
Expanded Uncertainty (95% CONFIDENCE LEVEL)		k=2				23.0	22.6	

17 CONCLUSION

17.1 Measurement Conclusion

The SAR evaluation indicates that the EUT complies with the RF radiation exposure limits of the FCC and Innovation, Science, and Economic Development Canada, with respect to all parameters subject to this test. These measurements were taken to simulate the RF effects of RF exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables. [3]

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APPENDIX A: SAR TEST DATA

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1875M

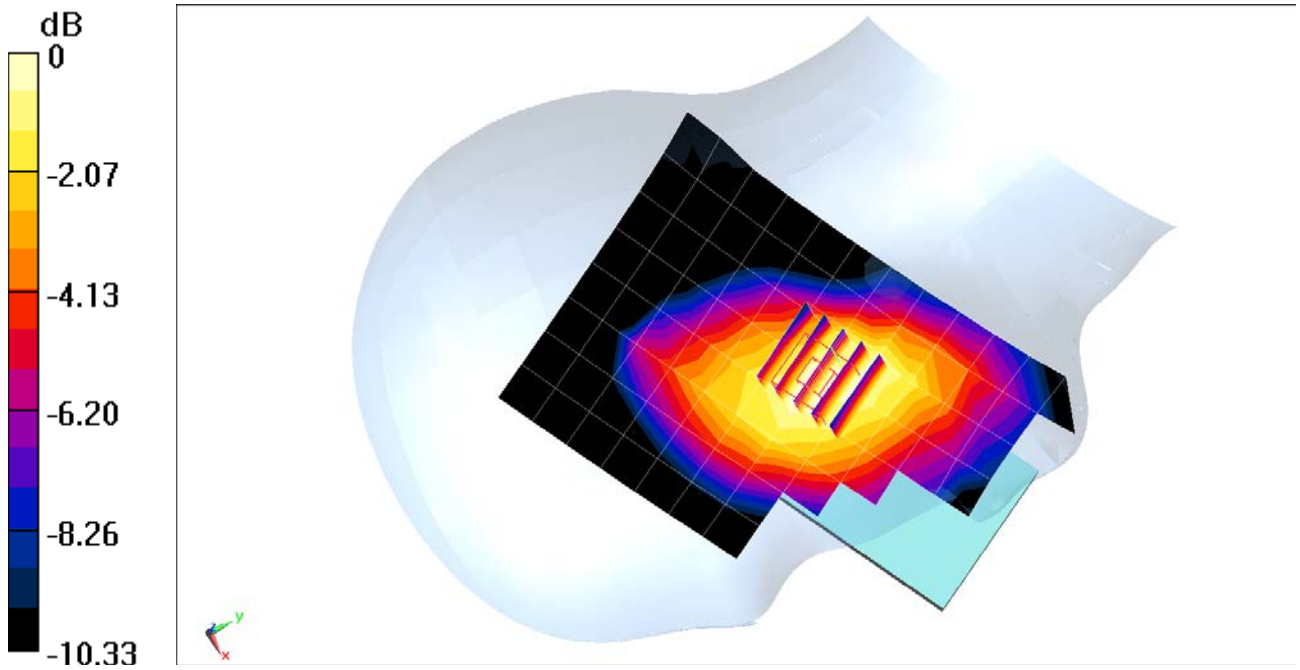
Communication System: UID 0, GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium: 835 Head Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.937 S/m; ε_r = 39.657; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 05-08-2019; Ambient Temp: 24.4°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN3914; ConvF(9.5, 9.5, 9.5) @ 836.6 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: Left For Head SAM with CRP v5.0; Type: QD000P40CD; Serial: TP:1687
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GSM 850, Right Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.63 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.194 W/kg
SAR(1 g) = 0.141 W/kg



0 dB = 0.174 W/kg = -7.59 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1876M

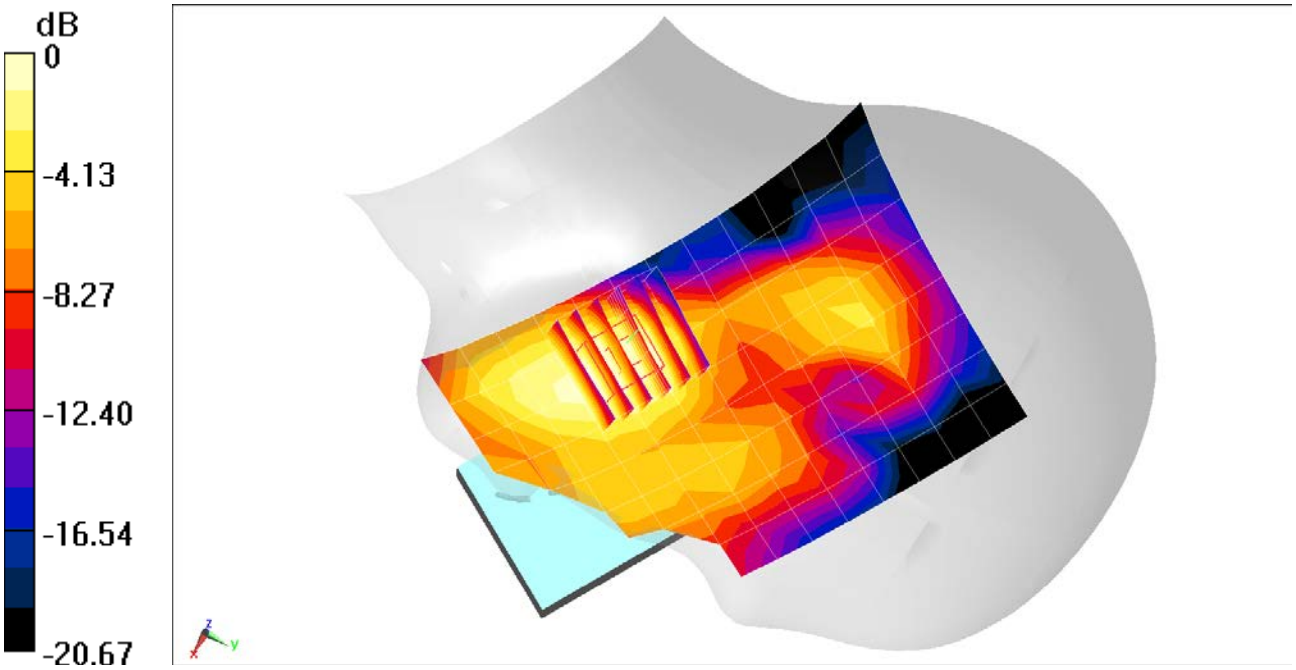
Communication System: UID 0, GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.411 S/m; ε_r = 39.433; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 05-08-2019; Ambient Temp: 23.8°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7410; ConvF(8.16, 8.16, 8.16) @ 1880 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GSM 1900, Left Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.255 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 0.0810 W/kg
SAR(1 g) = 0.051 W/kg



0 dB = 0.0665 W/kg = -11.77 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1940M

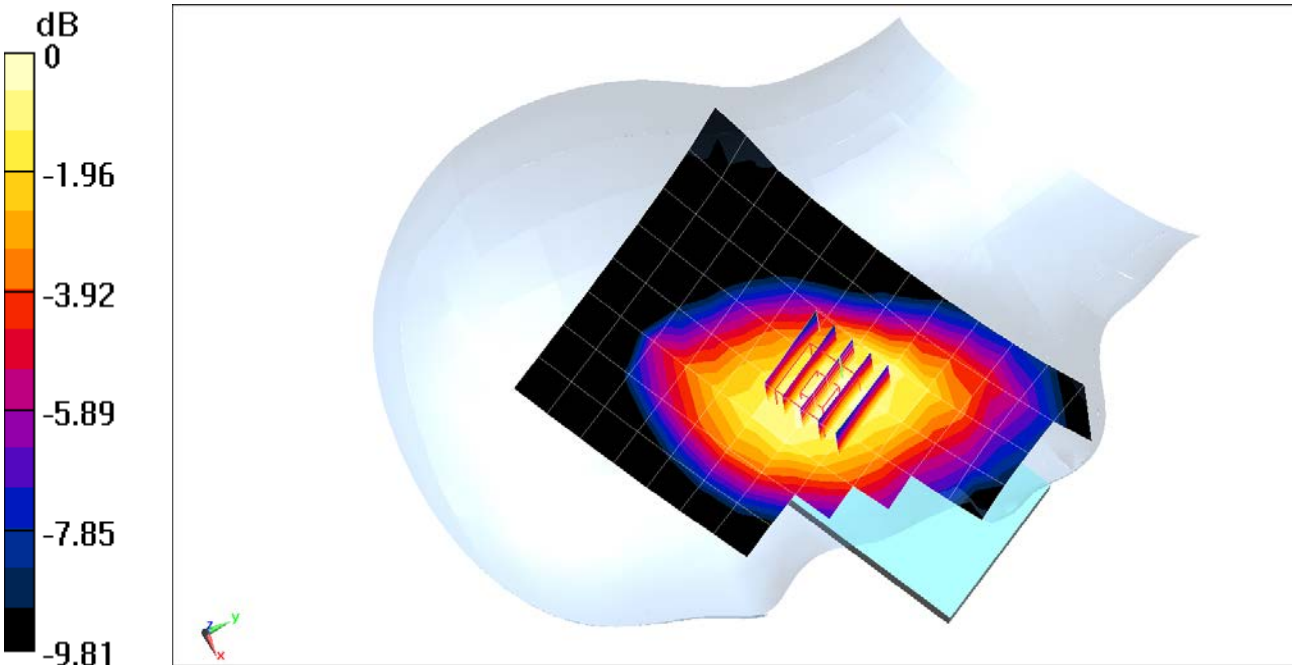
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
$f = 836.6$ MHz; $\sigma = 0.935$ S/m; $\varepsilon_r = 43.143$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 06-06-2019; Ambient Temp: 21.1°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7406; ConvF(9.78, 9.78, 9.78) @ 836.6 MHz; Calibrated: 5/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn859; Calibrated: 5/8/2019
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 850, Right Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.99 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.471 W/kg
SAR(1 g) = 0.353 W/kg



0 dB = 0.309 W/kg = -5.10 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1954M

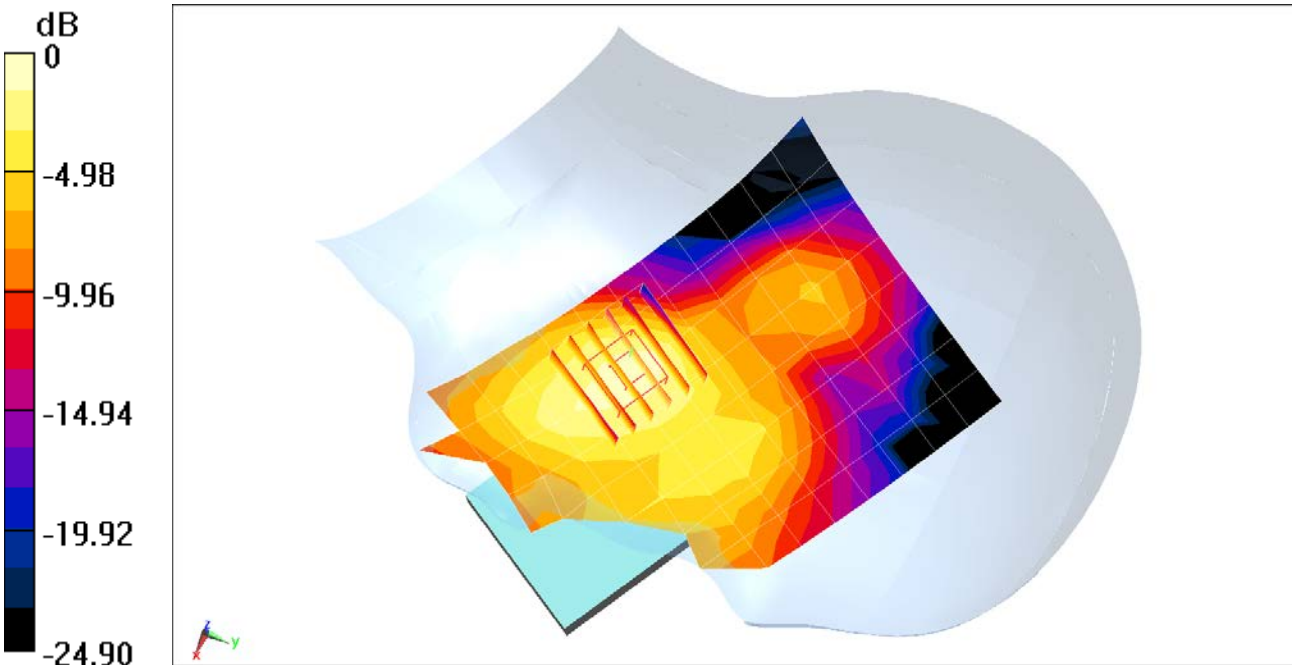
Communication System: UID 0, UMTS; Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
f = 1732.4 MHz; σ = 1.381 S/m; ε_r = 41.71; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 05-06-2019; Ambient Temp: 21.9°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7409; ConvF(8.43, 8.43, 8.43) @ 1732.4 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1750, Left Head, Cheek, Mid.ch

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.57 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.252 W/kg
SAR(1 g) = 0.156 W/kg



0 dB = 0.209 W/kg = -6.80 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1876M

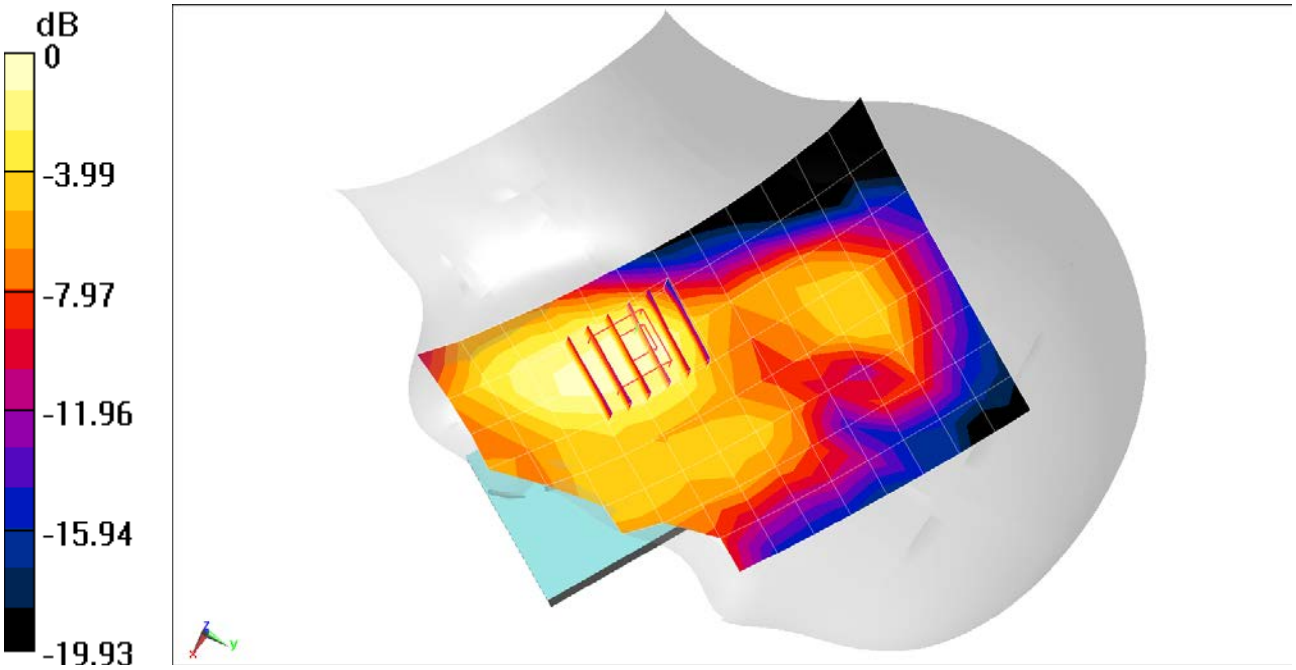
Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.437 S/m; ε_r = 38.657; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 05-12-2019; Ambient Temp: 21.3°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7410; ConvF(8.16, 8.16, 8.16) @ 1880 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1900, Left Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.565 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.200 W/kg
SAR(1 g) = 0.126 W/kg



0 dB = 0.167 W/kg = -7.77 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1876M

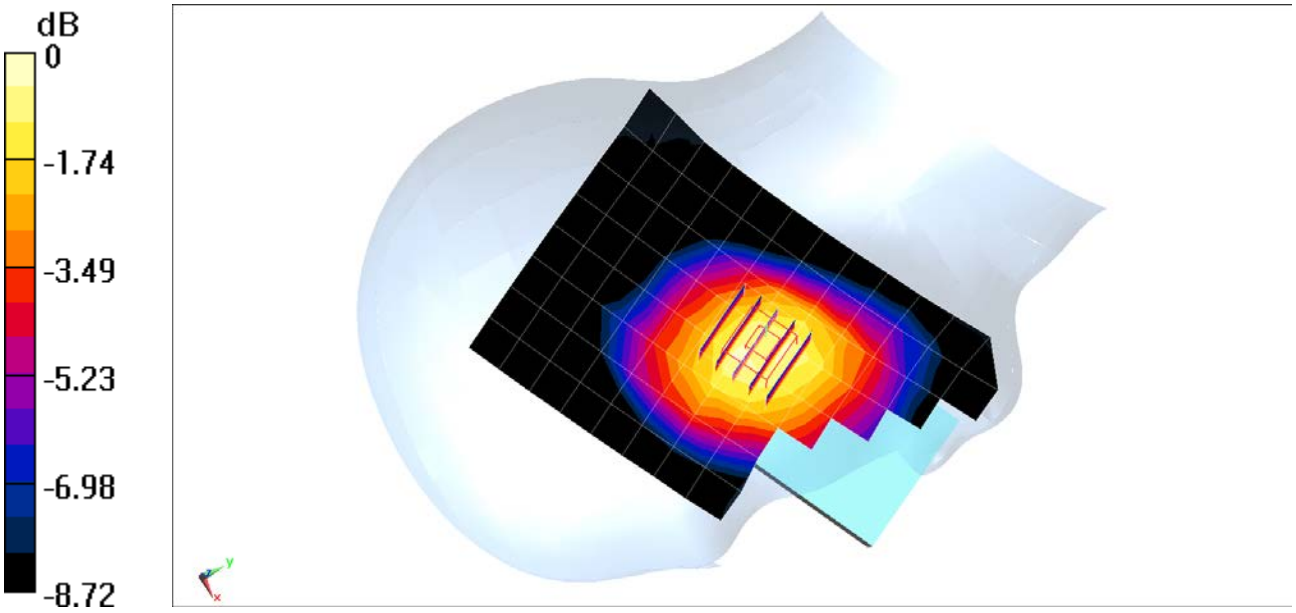
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
$f = 707.5$ MHz; $\sigma = 0.903$ S/m; $\varepsilon_r = 43.005$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 05-09-2019; Ambient Temp: 23.1°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN3914; ConvF(10, 10, 10) @ 707.5 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: Left For Head SAM with CRP v5.0; Type: QD000P40CD; Serial: TP:1687
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 12, Right Head, Cheek, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 25 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.75 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.214 W/kg
SAR(1 g) = 0.156 W/kg



0 dB = 0.194 W/kg = -7.12 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1876M

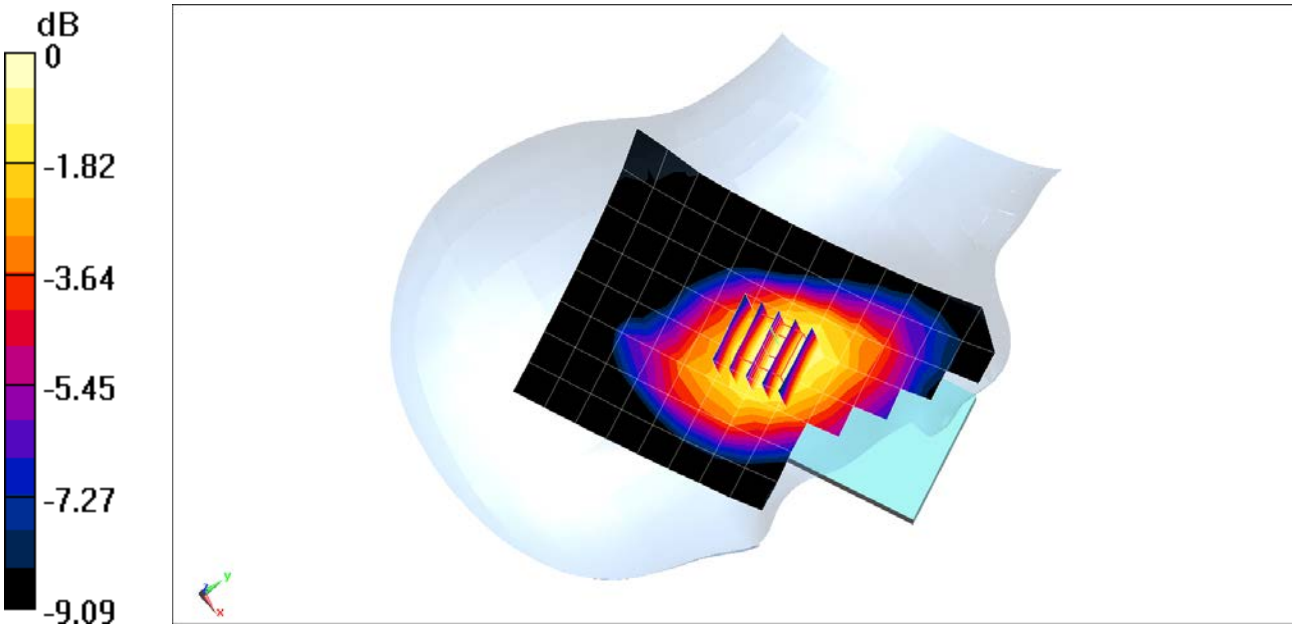
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 782 MHz; σ = 0.929 S/m; ε_r = 42.792; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 05-09-2019; Ambient Temp: 23.1°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN3914; ConvF(10, 10, 10) @ 782 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: Left For Head SAM with CRP v5.0; Type: QD000P40CD; Serial: TP:1687
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 13, Right Head, Cheek, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.71 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.250 W/kg
SAR(1 g) = 0.186 W/kg



0 dB = 0.229 W/kg = -6.40 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1940M

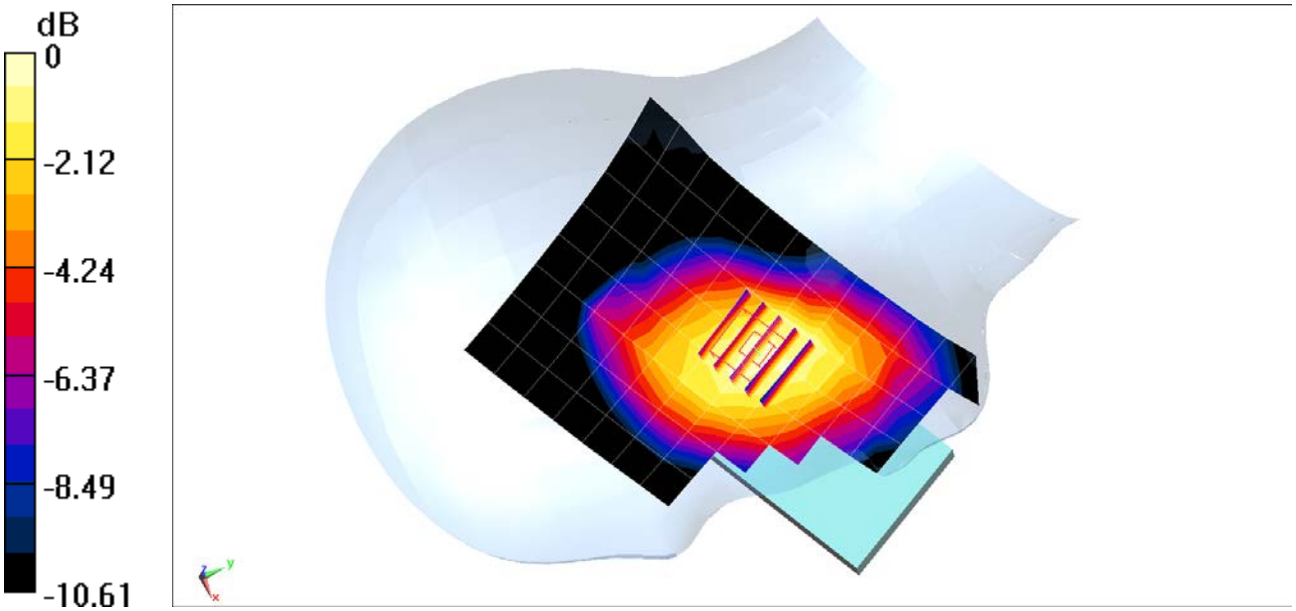
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 831.5 MHz; σ = 0.933 S/m; ε_r = 43.155; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06-06-2019; Ambient Temp: 21.1°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7406; ConvF(9.78, 9.78, 9.78) @ 831.5 MHz; Calibrated: 5/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn859; Calibrated: 5/8/2019
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 26 (Cell.), Right Head, Cheek, Mid.ch, 15 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.91 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.395 W/kg
SAR(1 g) = 0.288 W/kg



0 dB = 0.185 W/kg = -7.33 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1954M

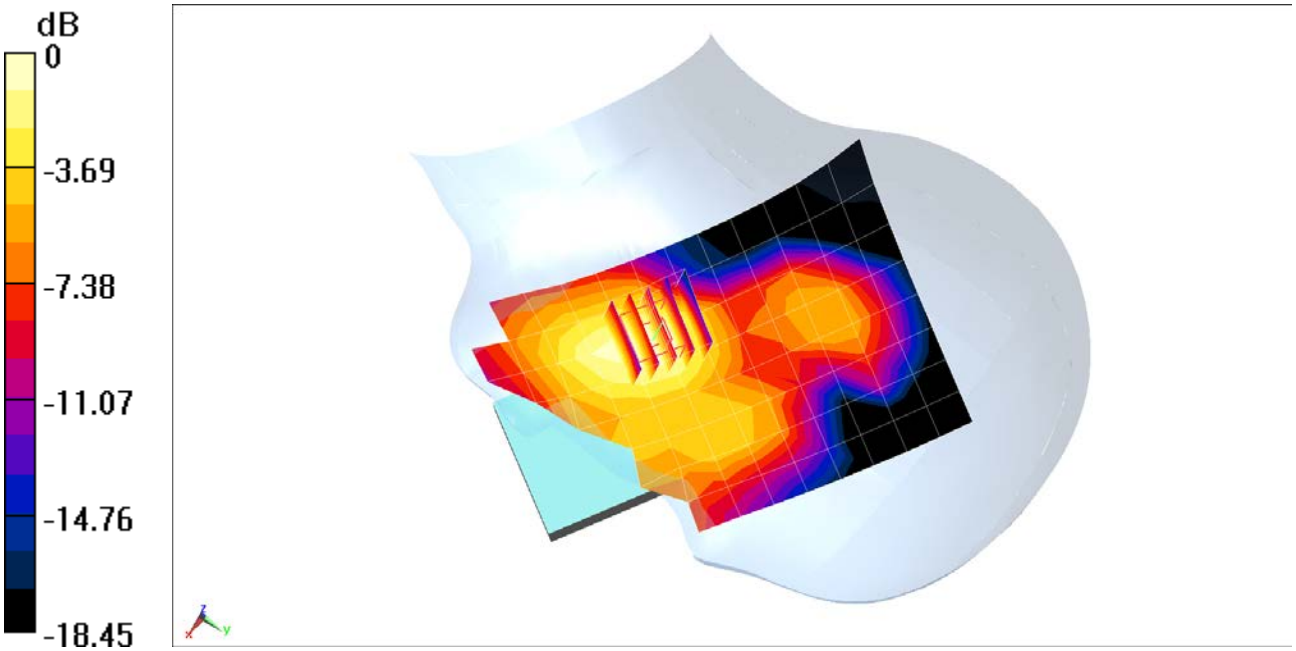
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
$f = 1770$ MHz; $\sigma = 1.405$ S/m; $\varepsilon_r = 41.647$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 05-06-2019; Ambient Temp: 21.9°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7409; ConvF(8.43, 8.43, 8.43) @ 1770 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS), Left Head, Cheek, High.ch,
20MHz Bandwidth, QPSK, 1RB, 0 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.44 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.248 W/kg
SAR(1 g) = 0.154 W/kg



0 dB = 0.206 W/kg = -6.86 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1876M

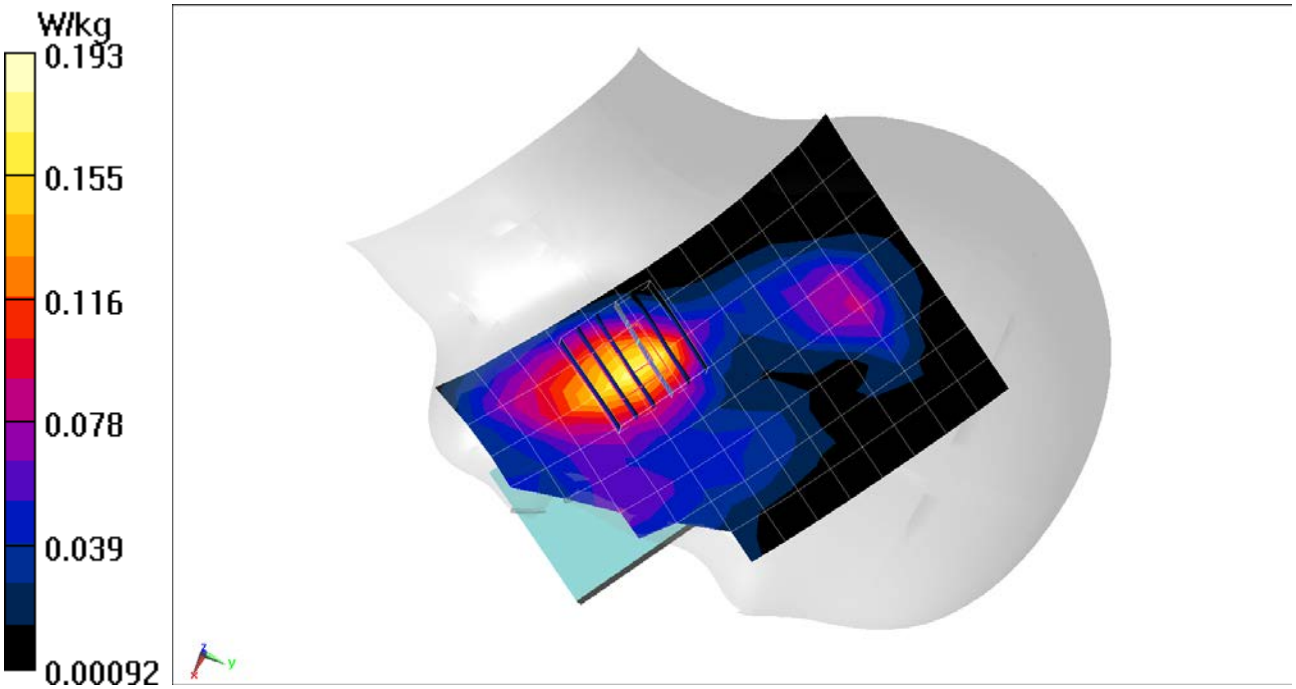
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1882.5 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
$f = 1882.5$ MHz; $\sigma = 1.44$ S/m; $\varepsilon_r = 38.646$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 05-12-2019; Ambient Temp: 21.3°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7410; ConvF(8.16, 8.16, 8.16) @ 1882.5 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 25 (PCS), Left Head, Cheek, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.44 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 0.236 W/kg
SAR(1 g) = 0.142 W/kg



DUT: A3LSMF907B; Type: Portable Handset; Serial: 1940M

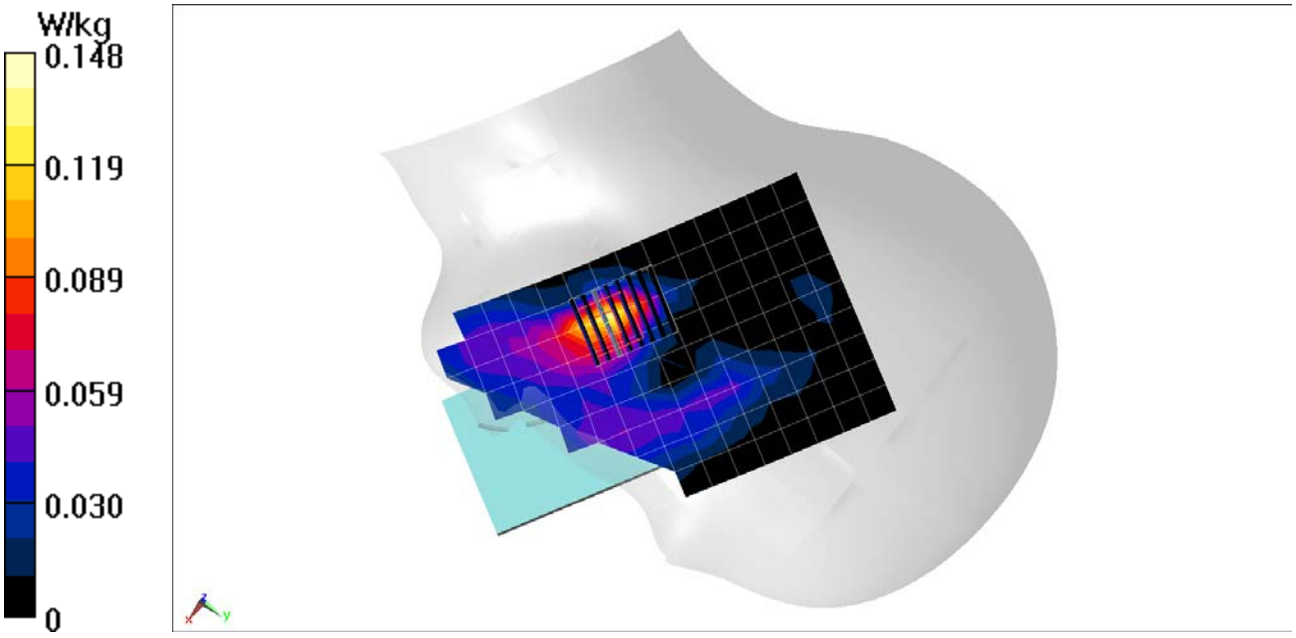
Communication System: UID 0, LTE Band 41; Frequency: 2593 MHz; Duty Cycle: 1:1.58
Medium: 2450 Head Medium parameters used (interpolated):
$f = 2593$ MHz; $\sigma = 1.906$ S/m; $\varepsilon_r = 37.705$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 05-08-2019; Ambient Temp: 23.3°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN3589; ConvF(6.25, 6.25, 6.25) @ 2593 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 41, Left Head, Cheek, Mid.ch, QPSK,
20 MHz Bandwidth, 1 RB, RB 0 Offset

Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.377 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.190 W/kg
SAR(1 g) = 0.087 W/kg



DUT: A3LSMF907B; Type: Portable Handset; Serial: 1921M

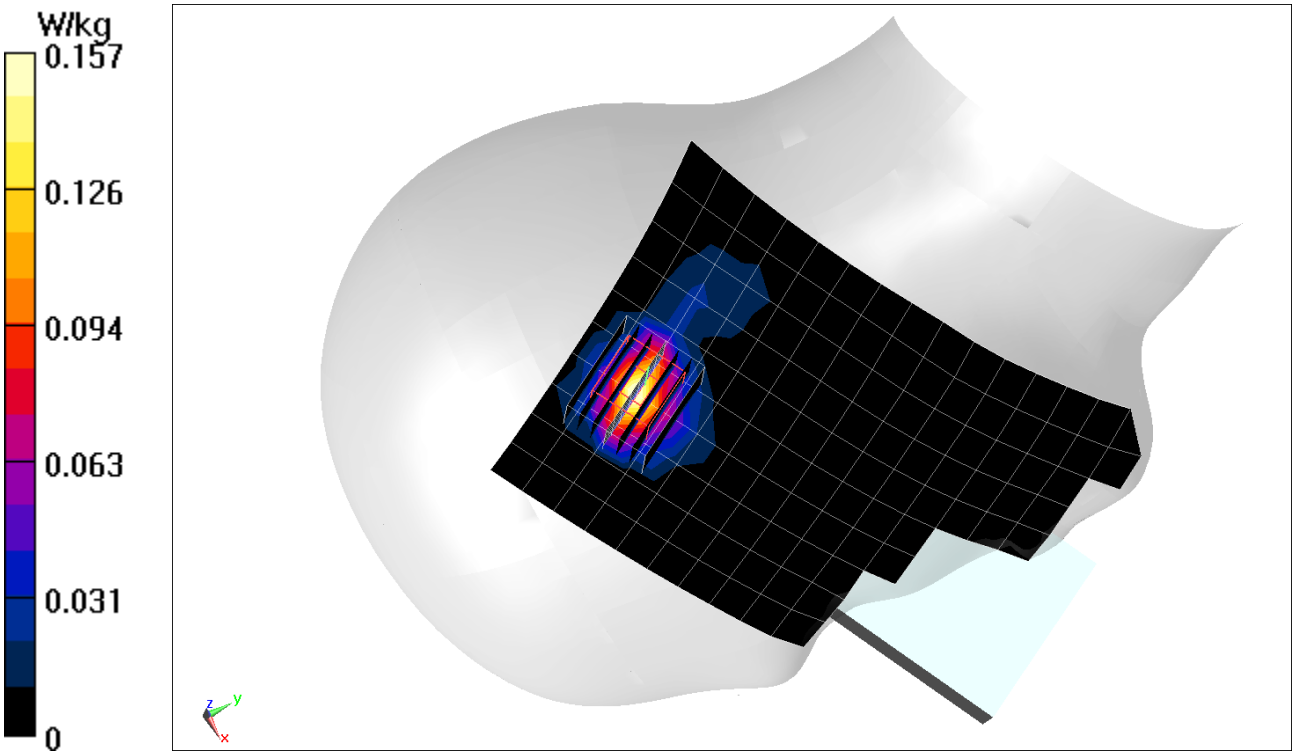
Communication System: UID 0, _IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used (interpolated):
f = 2462 MHz; σ = 1.806 S/m; ε_r = 37.88; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 05-08-2019; Ambient Temp: 23.3°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN3589; ConvF(6.46, 6.46, 6.46) @ 2462 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11b Antenna 1, 22 MHz Bandwidth,
Right Head, Tilt, Ch 11, 1 Mbps

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.798 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.209 W/kg
SAR(1 g) = 0.098 W/kg



DUT: A3LSMF907B; Type: Portable Handset; Serial: 1921M

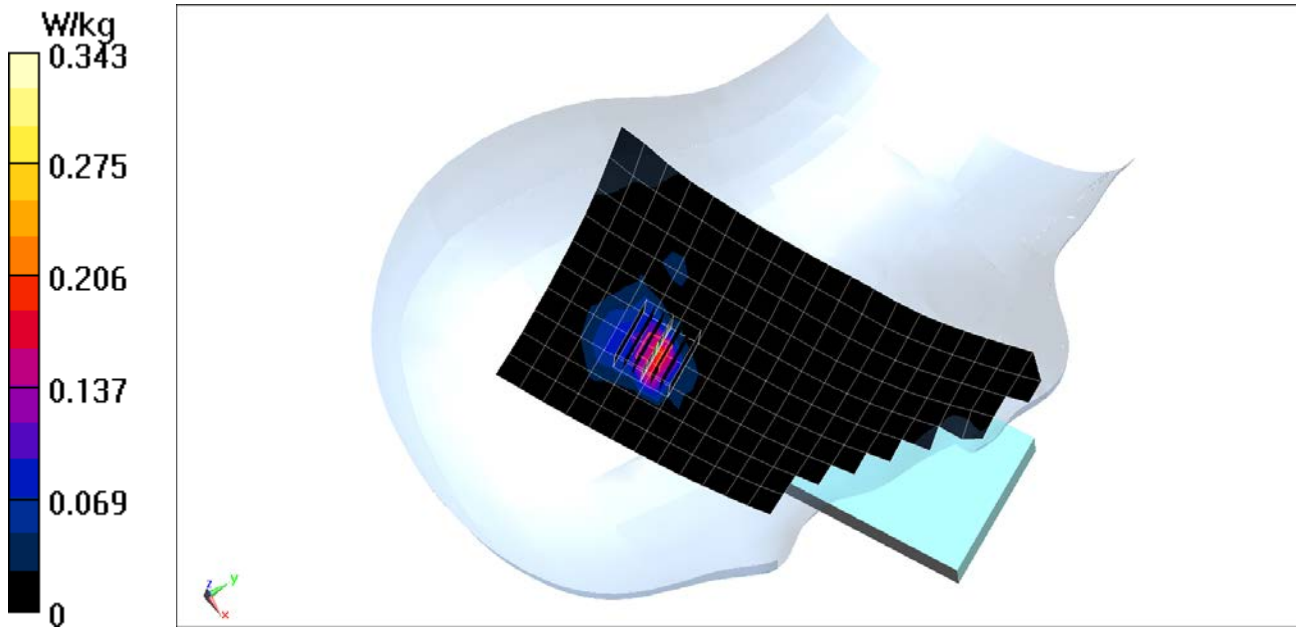
Communication System: UID 0, _IEEE 802.11n; Frequency: 5310 MHz; Duty Cycle: 1:1
Medium: 5GHz Head Medium parameters used (interpolated):
f = 5310 MHz; σ = 4.846 S/m; ε_r = 36.387; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 05-13-2019; Ambient Temp: 20.3°C; Tissue Temp: 20.9°C

Probe: EX3DV4 - SN7409; ConvF(5.2, 5.2, 5.2) @ 5310 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM with CRP v5.0 (Right); Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11n Antenna 1, U-NII-2A, 40 MHz Bandwidth, Right Head, Cheek, Ch 62, 13.5 Mbps

Area Scan (11x21x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 1.097 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.515 W/kg
SAR(1 g) = 0.112 W/kg



DUT: A3LSMF907B; Type: Portable Handset; Serial: 1921M

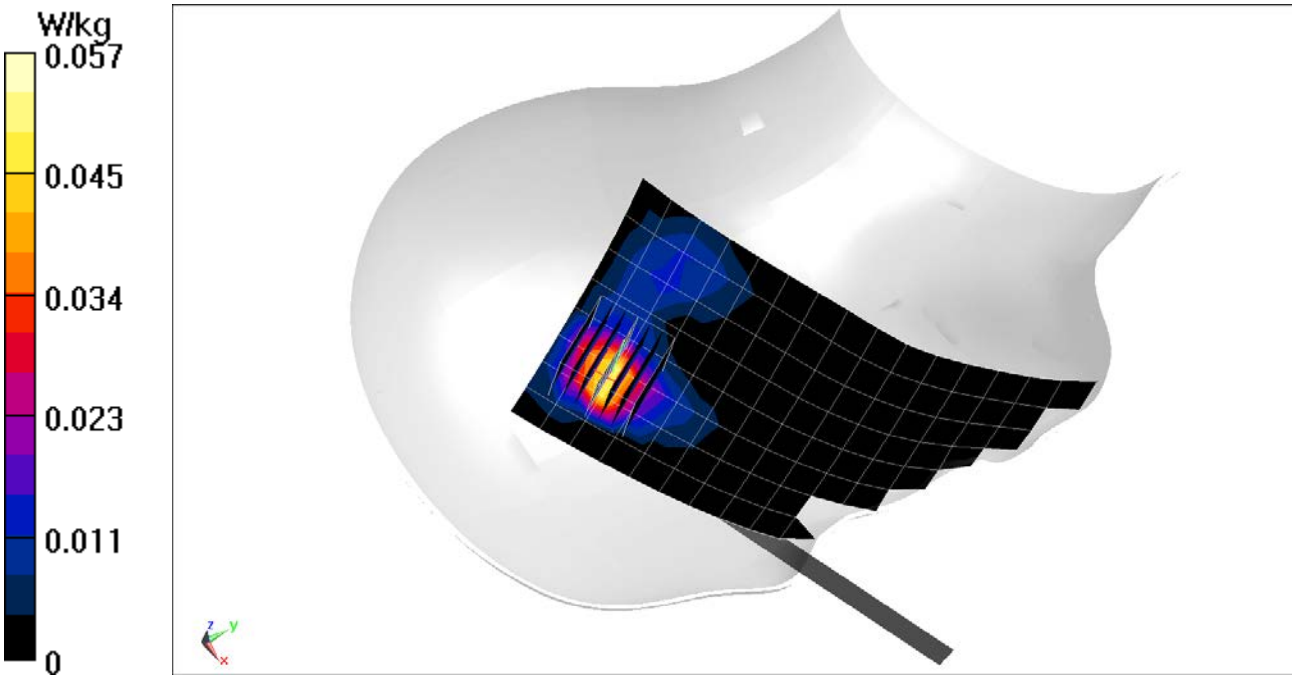
Communication System: UID 0, Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.297
Medium: 2450 Head Medium parameters used (interpolated):
f = 2402 MHz; σ = 1.763 S/m; ε_r = 37.968; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 05-08-2019; Ambient Temp: 23.3°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN3589; ConvF(6.46, 6.46, 6.46) @ 2402 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Bluetooth, Right Head, Tilt, Ch 0, 1 Mbps

Area Scan (9x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.733 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.0740 W/kg
SAR(1 g) = 0.035 W/kg



DUT: A3LSMF907B; Type: Portable Handset; Serial: 1954M

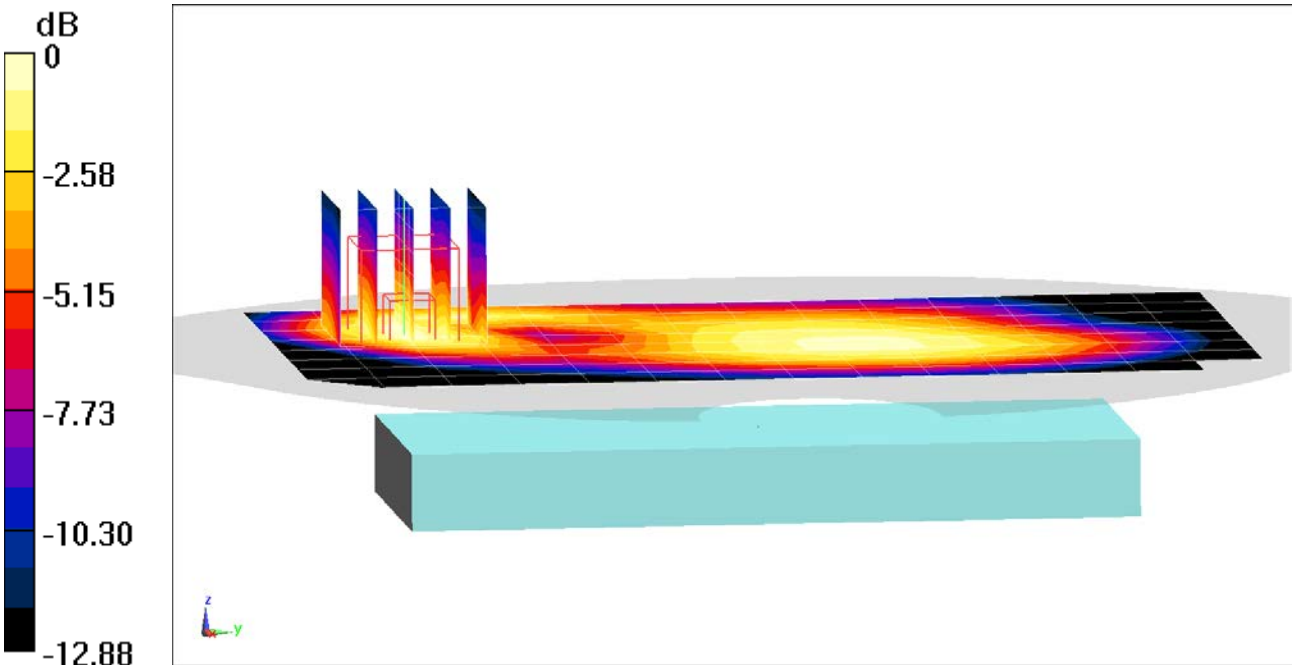
Communication System: UID 0, GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium: 835 Body Medium parameters used (interpolated):
$f = 836.6$ MHz; $\sigma = 0.984$ S/m; $\varepsilon_r = 54.282$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 5-8-2019; Ambient Temp: 21.9°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 836.6 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GSM 850, Body SAR, Back side, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.74 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.174 W/kg
SAR(1 g) = 0.107 W/kg



0 dB = 0.149 W/kg = -8.27 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1954M

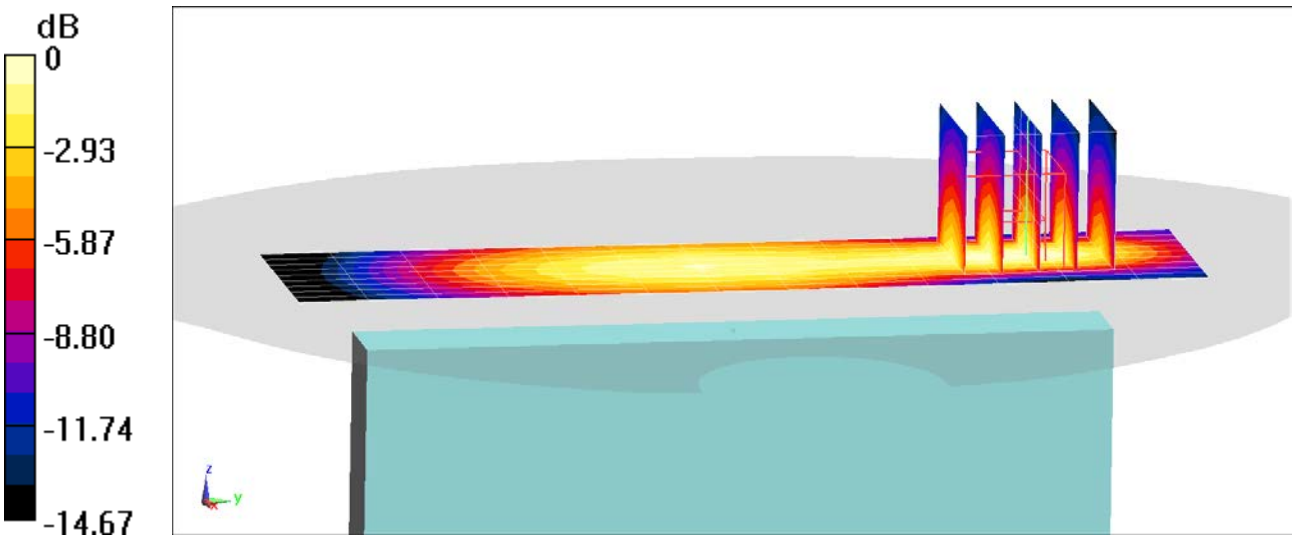
Communication System: UID 0, _GSM GPRS; 3 Tx slots; Frequency: 836.6 MHz; Duty Cycle: 1:2.76
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.984 S/m; ε_r = 54.282; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 5-8-2019; Ambient Temp: 21.9°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 836.6 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 850, Body SAR, Right Edge, Mid.ch, 3 Tx Slots

Area Scan (10x14x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.40 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.888 W/kg
SAR(1 g) = 0.489 W/kg



0 dB = 0.739 W/kg = -1.31 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1876M

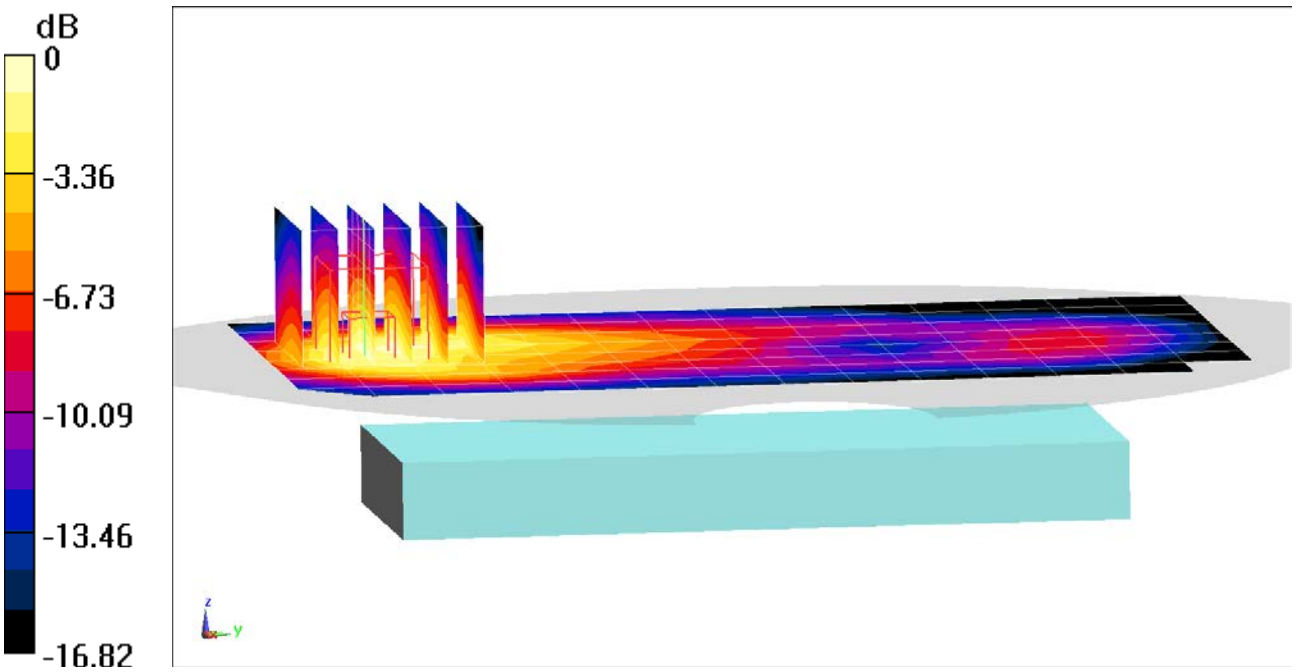
Communication System: UID 0, GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.557 S/m; ε_r = 52.423; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05-01-2019; Ambient Temp: 23.2°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1880 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GSM 1900, Body SAR, Back side, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.33 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.275 W/kg
SAR(1 g) = 0.169 W/kg



0 dB = 0.237 W/kg = -6.25 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1876M

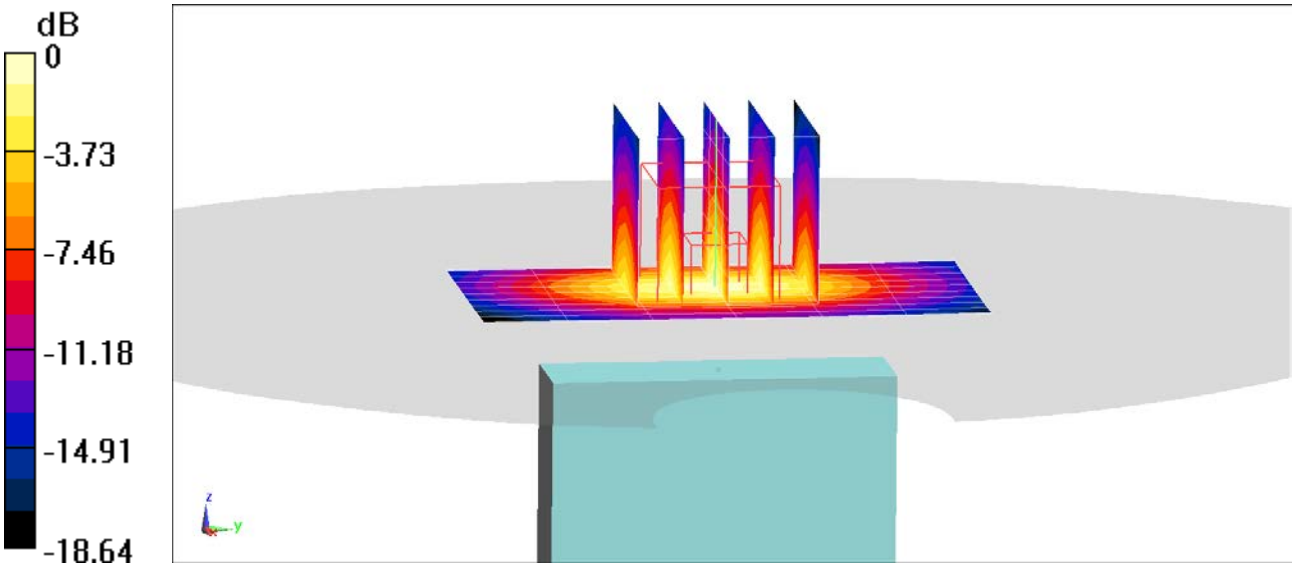
Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 1850.2 MHz; Duty Cycle: 1:2.76
Medium: 1900 Body Medium parameters used (interpolated):
f = 1850.2 MHz; σ = 1.526 S/m; ε_r = 52.534; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-01-2019; Ambient Temp: 23.2°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1850.2 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 1900, Body SAR, Bottom Edge, Low.ch, 3 Tx Slots

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.74 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.44 W/kg
SAR(1 g) = 0.815 W/kg



0 dB = 1.23 W/kg = 0.90 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1954M

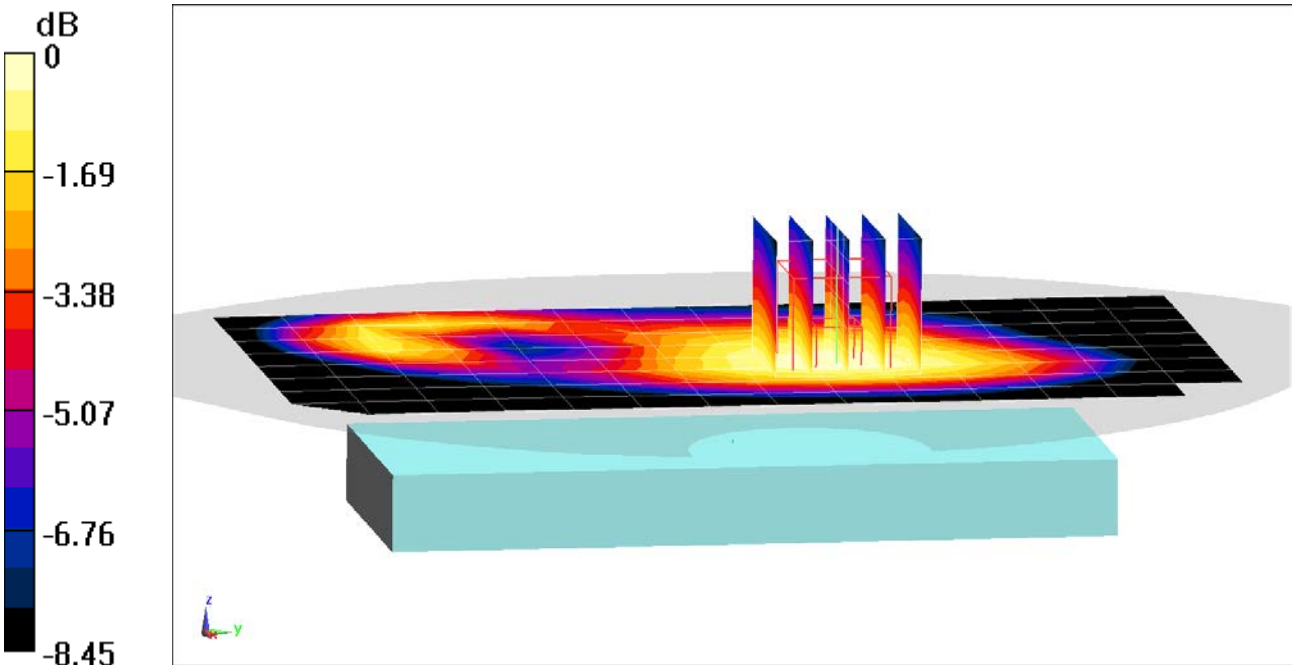
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.984 S/m; ε_r = 54.282; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 5-8-2019; Ambient Temp: 21.9°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 836.6 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 850, Body SAR, Back side, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.08 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.222 W/kg
SAR(1 g) = 0.163 W/kg



0 dB = 0.202 W/kg = -6.95 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1940M

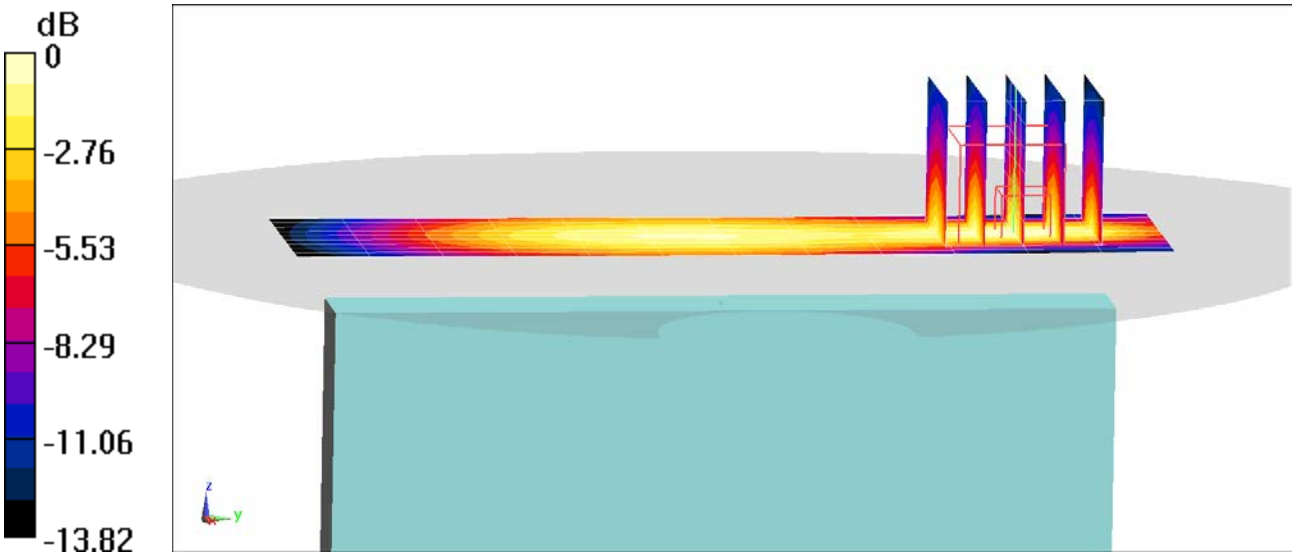
Communication System: UID 0, UMTS; Frequency: 846.6 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
$f = 846.6$ MHz; $\sigma = 0.992$ S/m; $\varepsilon_r = 52.981$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-03-2019 Ambient Temp: 18.7°C; Tissue Temp: 19.8 °C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 846.6 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 850, Body SAR, Right Edge, Mid.ch

Area Scan (13x15x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.60 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.547 W/kg



0 dB = 0.624 W/kg = -2.05 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1940M

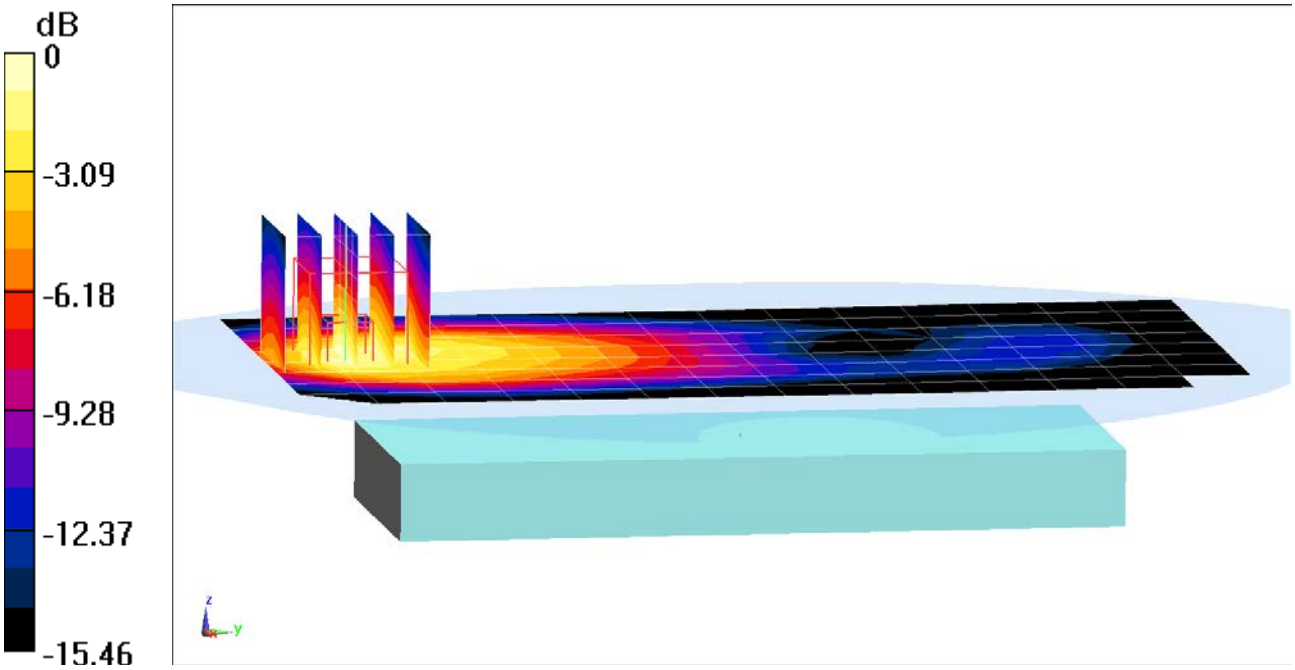
Communication System: UID 0, UMTS; Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
$f = 1752.6$ MHz; $\sigma = 1.5$ S/m; $\varepsilon_r = 52.475$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05-01-2019; Ambient Temp: 22.3°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN3914; ConvF(7.89, 7.89, 7.89) @ 1752.6 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1750, Body SAR, Back side, High.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.20 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.11 W/kg
SAR(1 g) = 0.685 W/kg



0 dB = 0.953 W/kg = -0.21 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1940M

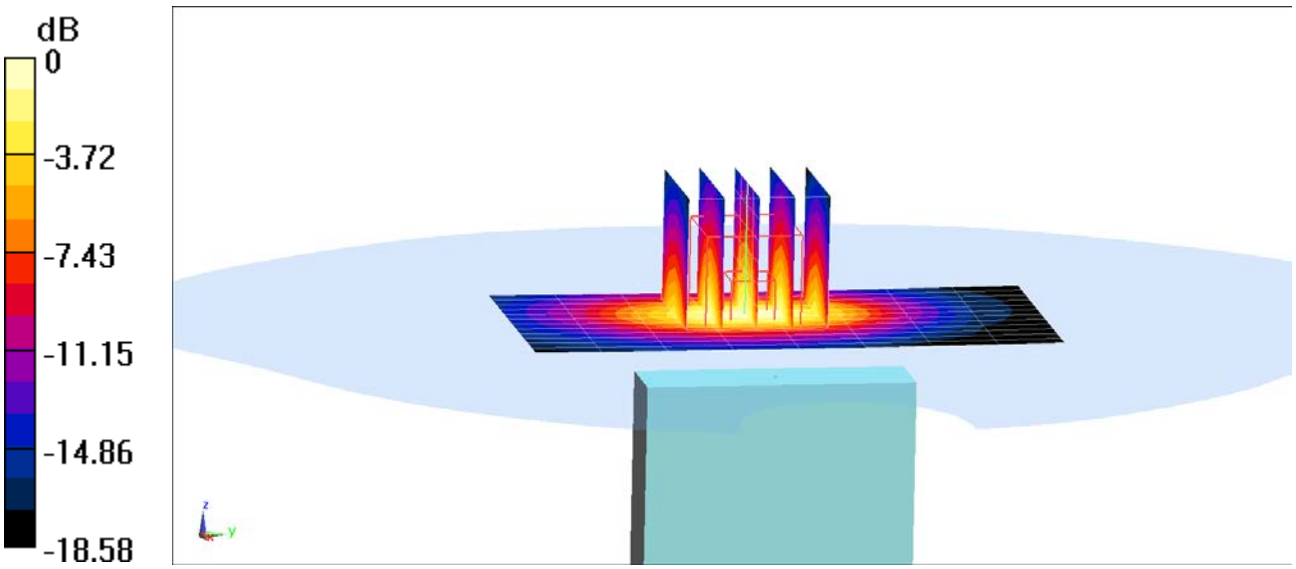
Communication System: UID 0, UMTS , Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1752.6 MHz; σ = 1.5 S/m; ε_r = 52.475; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-01-2019; Ambient Temp: 22.3°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN3914; ConvF(7.89, 7.89, 7.89) @ 1752.6 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1750, Body SAR, Bottom Edge, High.ch

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.48 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.673 W/kg



0 dB = 1.02 W/kg = 0.09 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1876M

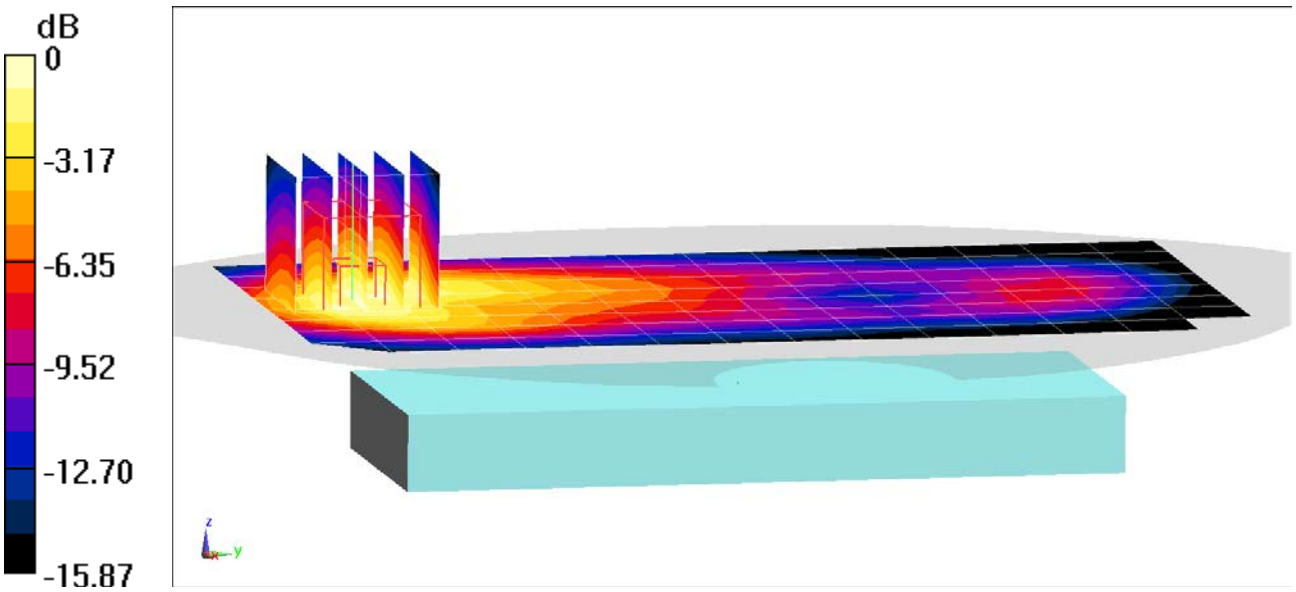
Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.557 S/m; ε_r = 52.423; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05-01-2019; Ambient Temp: 23.2°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1880 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1900, Body SAR, Back side, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.04 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.597 W/kg
SAR(1 g) = 0.369 W/kg



0 dB = 0.514 W/kg = -2.89 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1876M

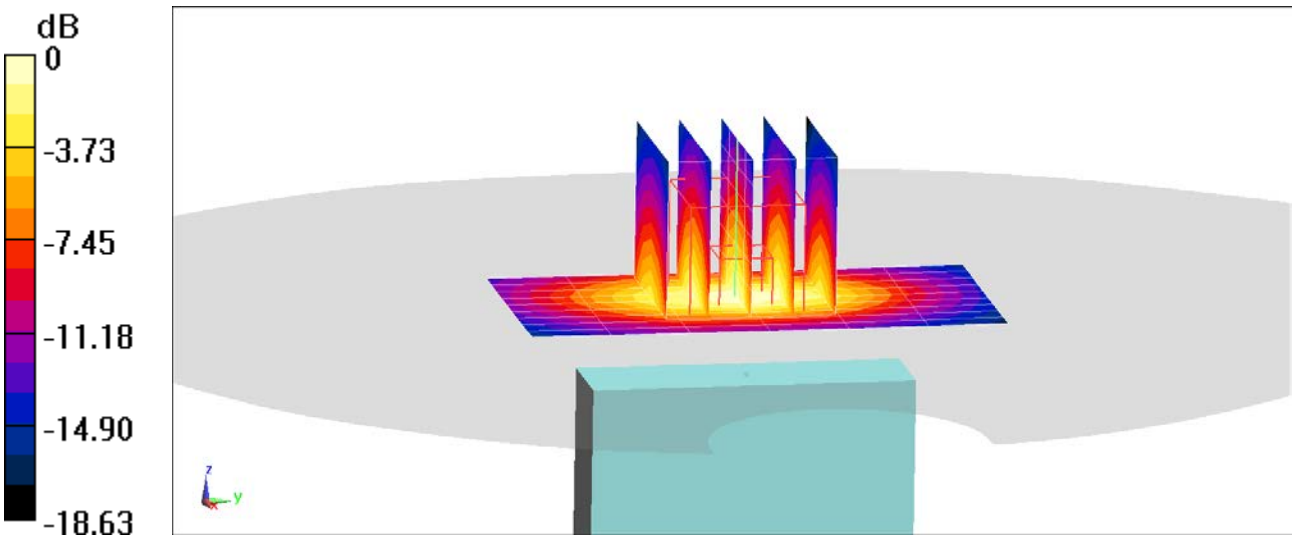
Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.557 S/m; ε_r = 52.423; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-01-2019; Ambient Temp: 23.2°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1880 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1900, Body SAR, Bottom Edge, Mid.ch

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.24 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.742 W/kg



0 dB = 1.11 W/kg = 0.45 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1954M

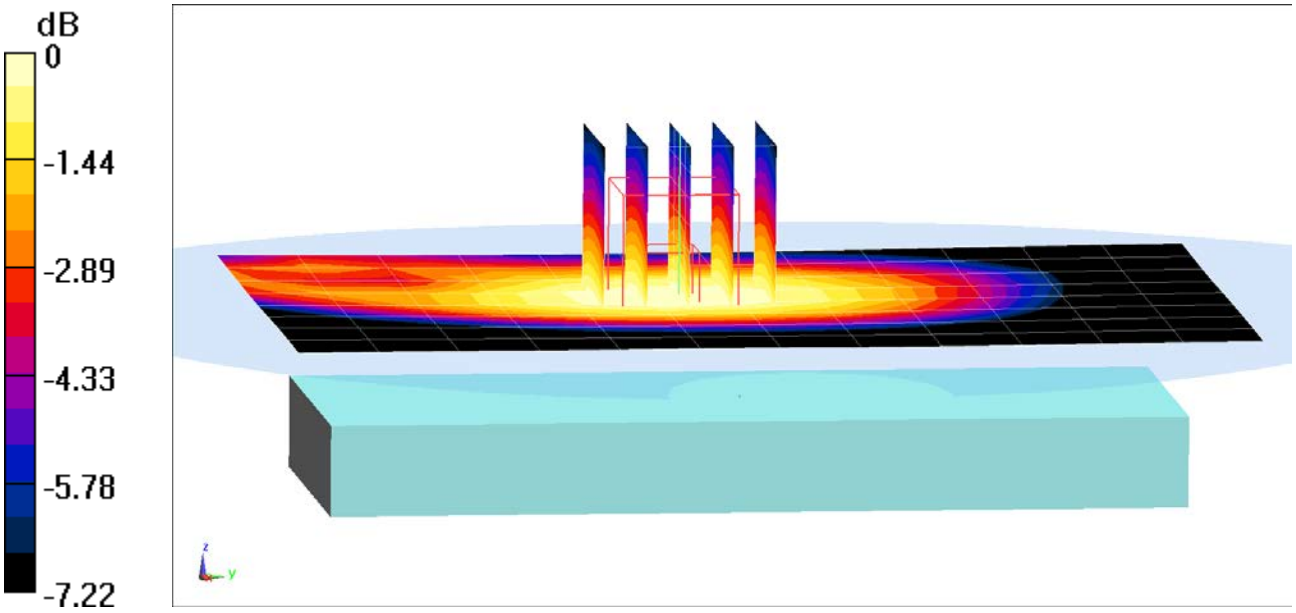
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.933 S/m; ε_r = 54.27; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05-14-2019; Ambient Temp: 23.5°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7410; ConvF(9.87, 9.87, 9.87) @ 707.5 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 12, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 25 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.48 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.212 W/kg
SAR(1 g) = 0.166 W/kg



0 dB = 0.198 W/kg = -7.03 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1954M

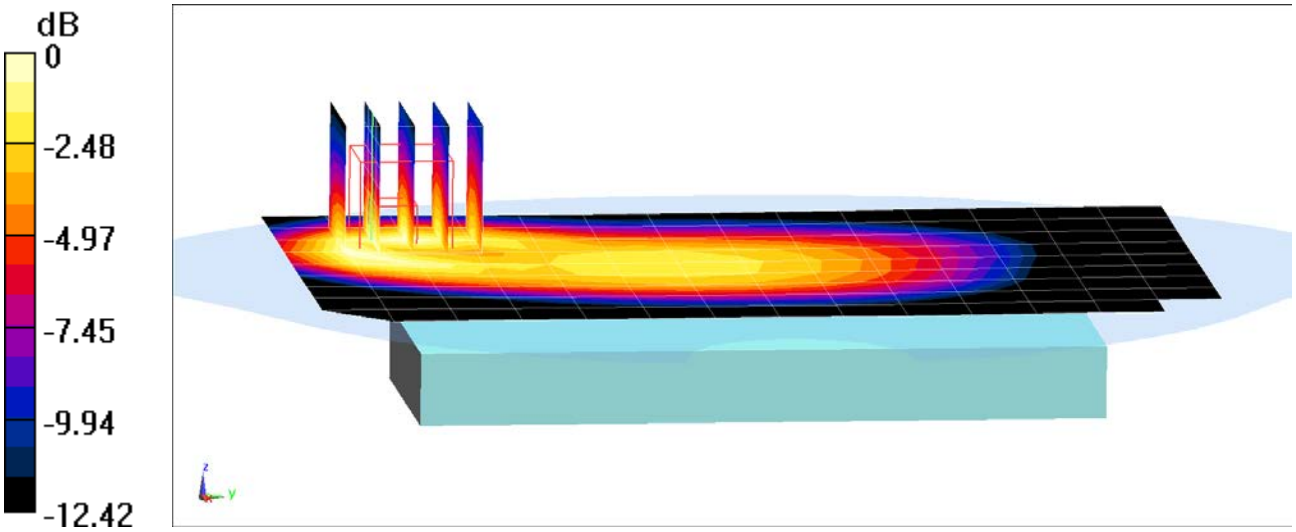
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.933 S/m; ε_r = 54.27; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-14-2019; Ambient Temp: 23.5°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7410; ConvF(9.87, 9.87, 9.87) @ 707.5 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 12, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 25 RB Offset

Area Scan (10x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.27 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.409 W/kg
SAR(1 g) = 0.235 W/kg



0 dB = 0.340 W/kg = -4.69 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1954M

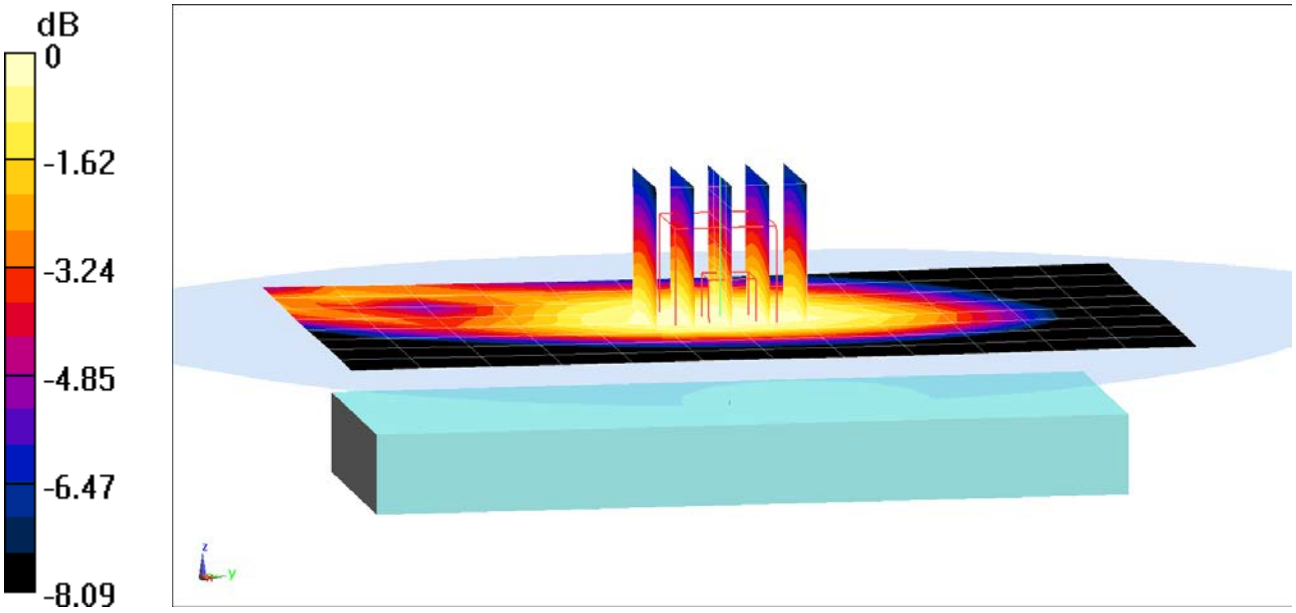
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 782 MHz; σ = 0.999 S/m; ε_r = 53.585; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05-14-2019; Ambient Temp: 23.5°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7410; ConvF(9.87, 9.87, 9.87) @ 782 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 13, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.537 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.265 W/kg
SAR(1 g) = 0.203 W/kg



0 dB = 0.245 W/kg = -6.11 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1954M

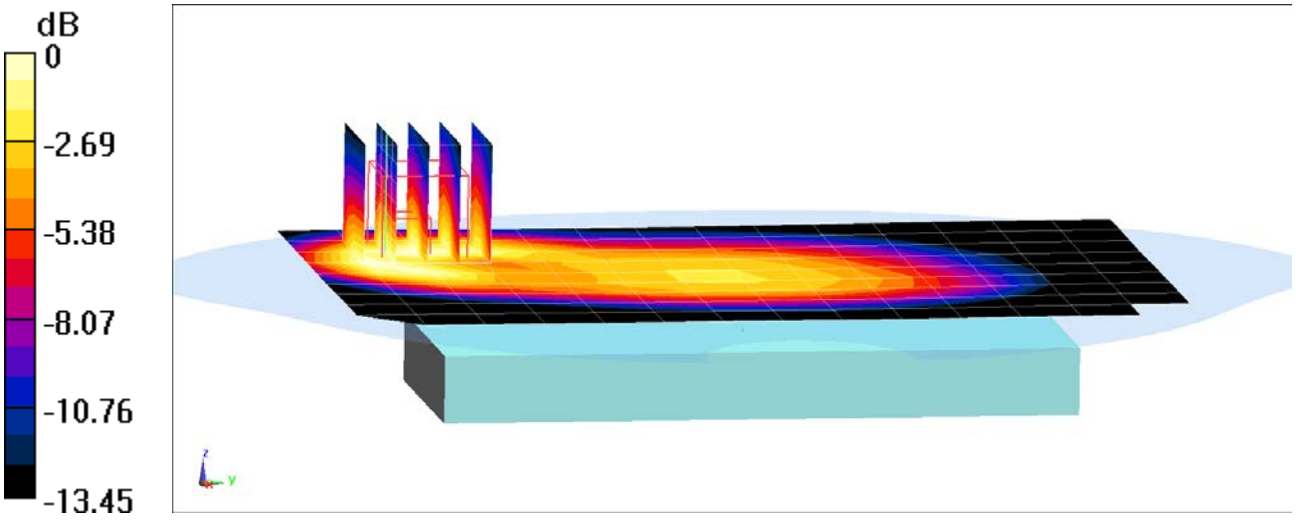
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 782 MHz; σ = 0.999 S/m; ε_r = 53.585; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-14-2019; Ambient Temp: 23.5°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7410; ConvF(9.87, 9.87, 9.87) @ 782 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 13, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (10x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.98 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.544 W/kg
SAR(1 g) = 0.313 W/kg



0 dB = 0.456 W/kg = -3.41 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1940M

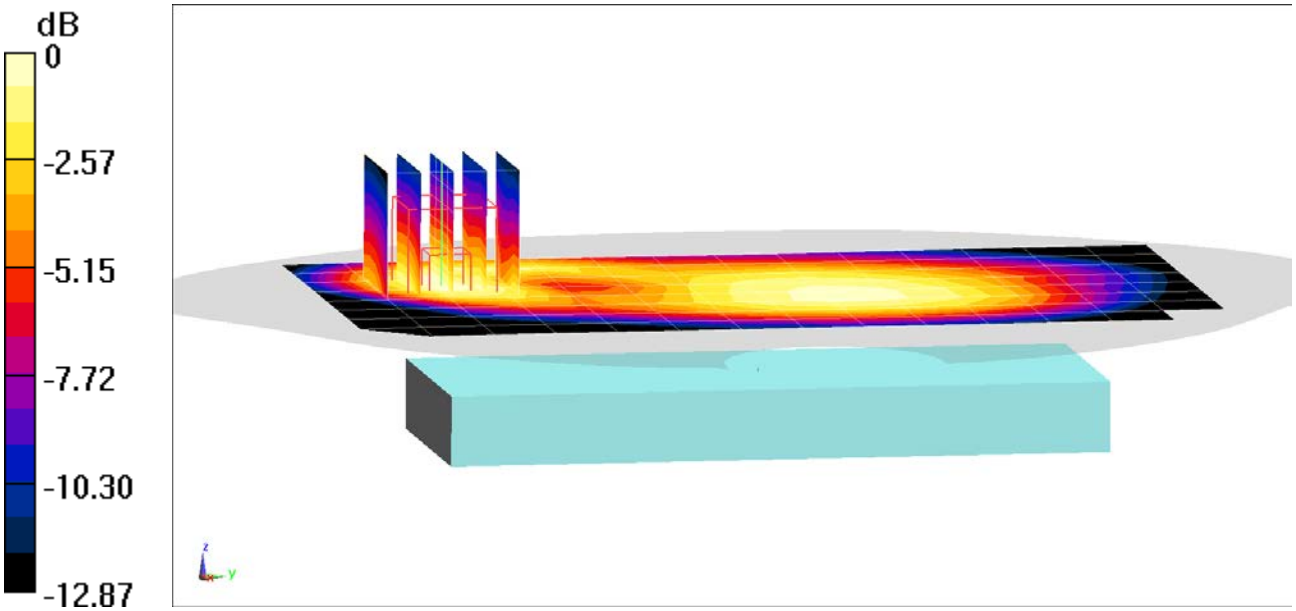
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 831.5 MHz; σ = 1.002 S/m; ε_r = 53.019; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date:06-05-2019; Ambient Temp: 22.7°C; Tissue Temp: 20.2°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 831.5 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 26 (Cell.), Body SAR, Back side, Mid.ch,
15 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.02 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.163 W/kg
SAR(1 g) = 0.119 W/kg



0 dB = 0.106 W/kg = -9.75 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1940M

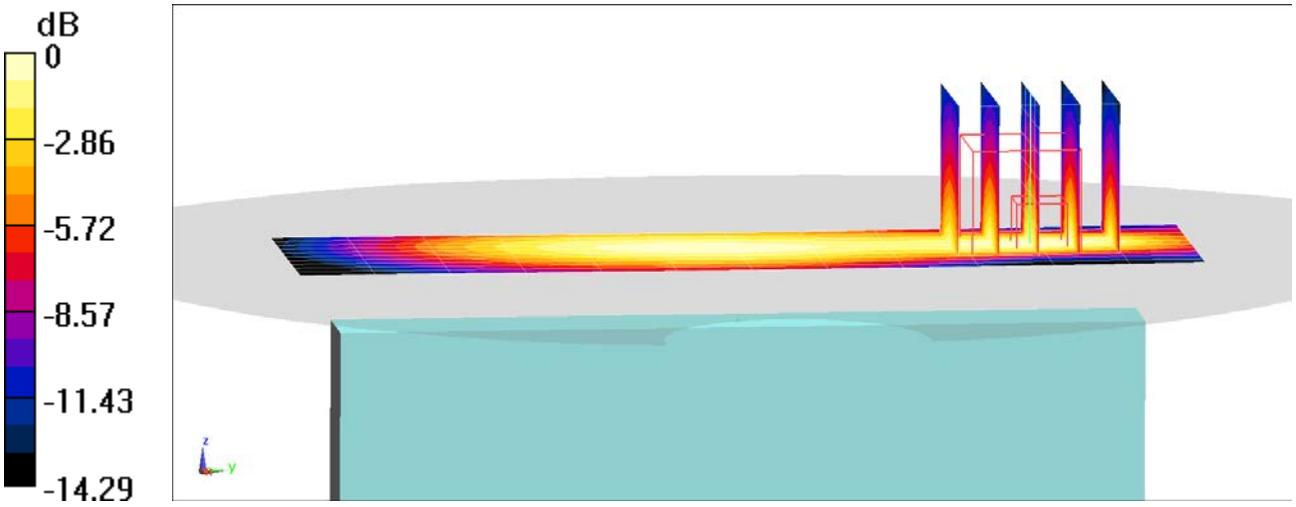
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 831.5 MHz; σ = 1.002 S/m; ε_r = 53.019; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date:06-05-2019; Ambient Temp: 22.7°C; Tissue Temp: 20.2°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 831.5 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 26 (Cell.), Body SAR, Right Edge, Mid.ch,
15 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (13x15x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.51 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 0.928 W/kg
SAR(1 g) = 0.500 W/kg



0 dB = 0.309 W/kg = -5.10 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1908M

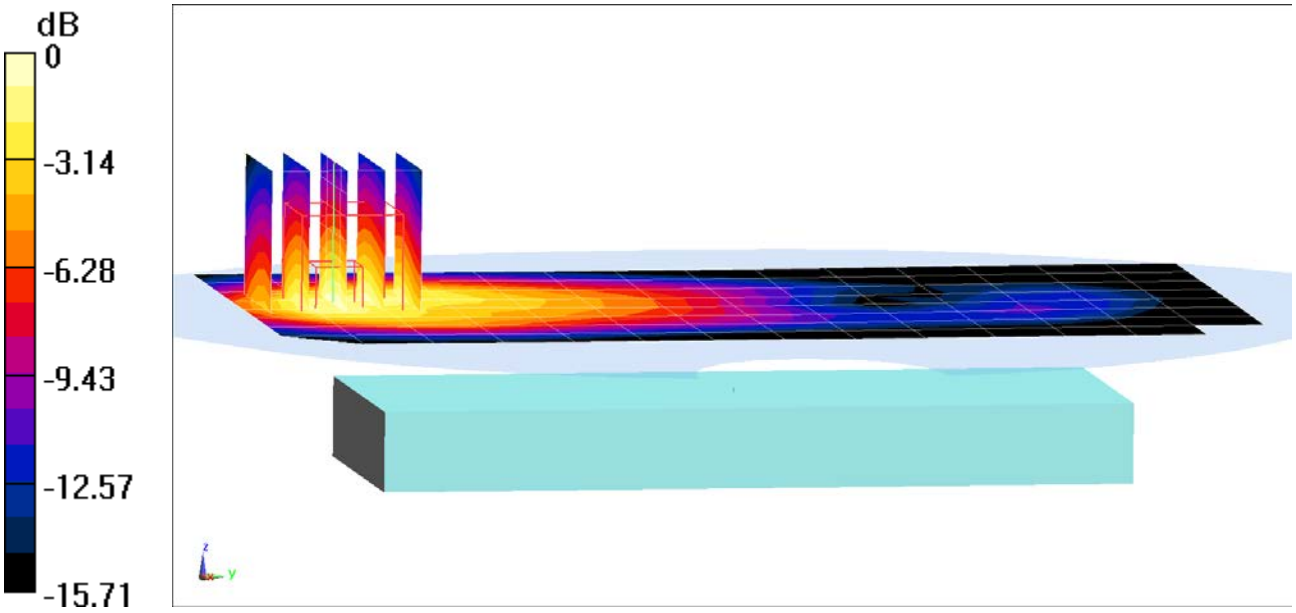
Communication System: UID 0, LTE Band 66 (AWS), 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1745 MHz; σ = 1.492 S/m; ε_r = 52.505; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05-01-2019; Ambient Temp: 22.3°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN3914; ConvF(7.89, 7.89, 7.89) @ 1745 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS), Body SAR, Back side, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.04 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.984 W/kg
SAR(1 g) = 0.607 W/kg



0 dB = 0.846 W/kg = -0.73 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1908M

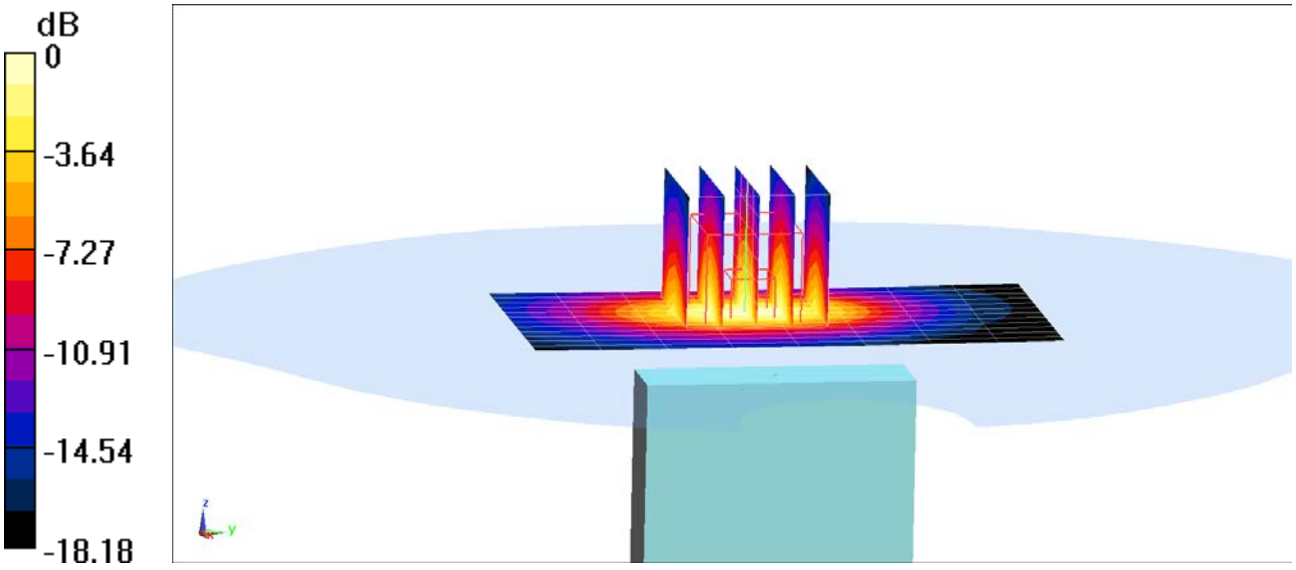
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1770 MHz; σ = 1.518 S/m; ε_r = 52.399; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-01-2019; Ambient Temp: 22.3°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN3914; ConvF(7.89, 7.89, 7.89) @ 1770 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS), Body SAR, Bottom Edge, High.ch,
20 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset

Area Scan (13x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.36 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.56 W/kg
SAR(1 g) = 0.869 W/kg



0 dB = 1.32 W/kg = 1.21 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1908M

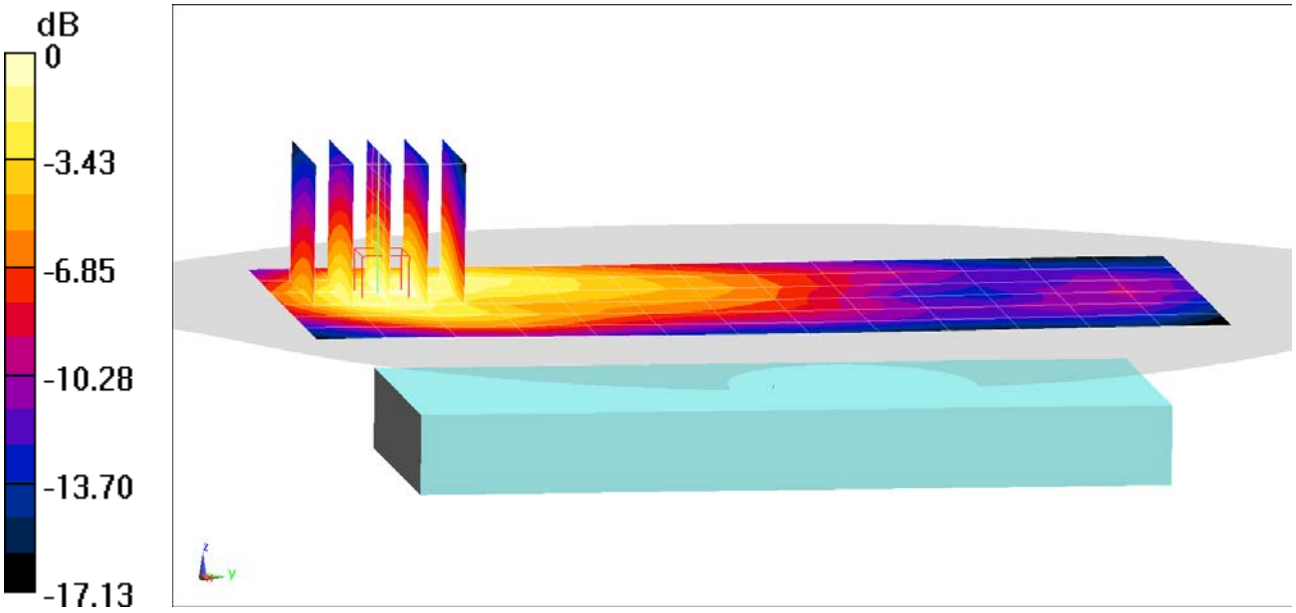
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1882.5 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
$f = 1882.5$ MHz; $\sigma = 1.501$ S/m; $\varepsilon_r = 52.24$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05-06-2019; Ambient Temp: 22.0°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(7.93, 7.93, 7.93) @ 1882.5 MHz; Calibrated: 4/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/18/2019
Phantom: Twin-SAM V4.0 Front Right; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 25 (PCS), Body SAR, Back side, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.55 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.555 W/kg
SAR(1 g) = 0.331 W/kg



0 dB = 0.475 W/kg = -3.23 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1908M

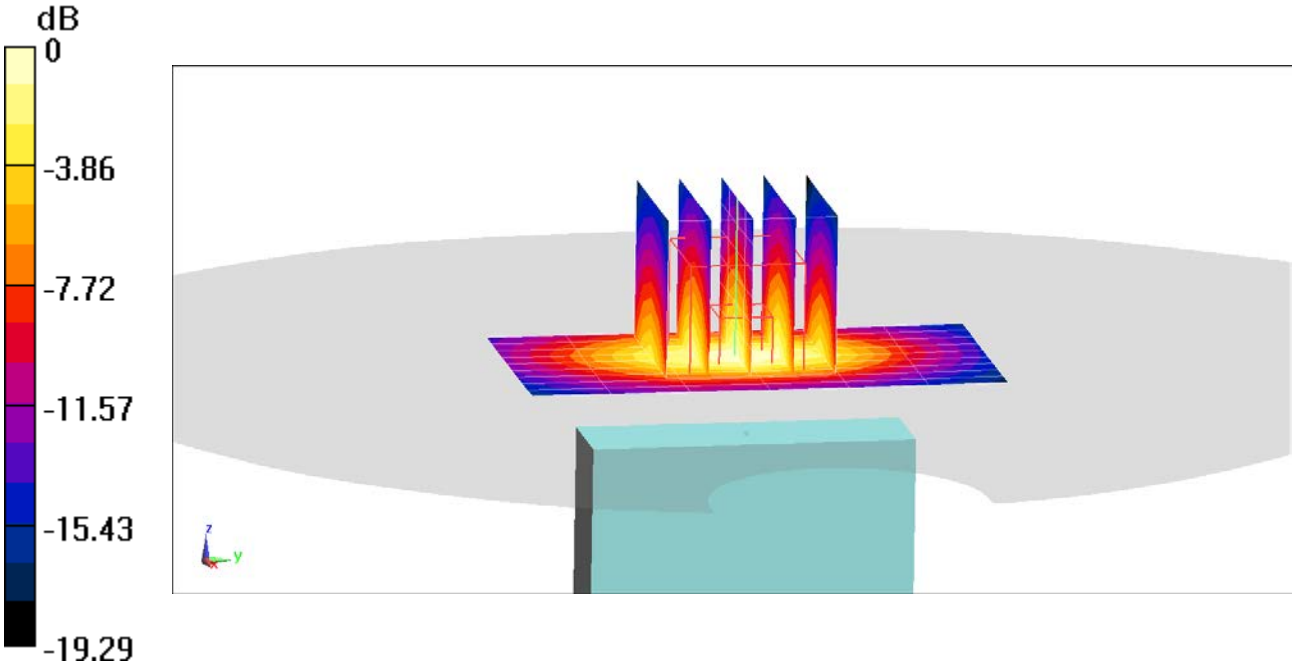
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1905 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1905 MHz; σ = 1.526 S/m; ε_r = 52.166; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-06-2019; Ambient Temp: 22.0°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(7.93, 7.93, 7.93) @ 1905 MHz; Calibrated: 4/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/18/2019
Phantom: Twin-SAM V4.0 Front Right; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 25 (PCS), Body SAR, Bottom Edge,
High.ch, 20 MHz Bandwidth, QPSK, 100 RB, 0 RB Offset

Area Scan (9x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.46 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.57 W/kg
SAR(1 g) = 0.877 W/kg



0 dB = 1.33 W/kg = 1.24 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1874M

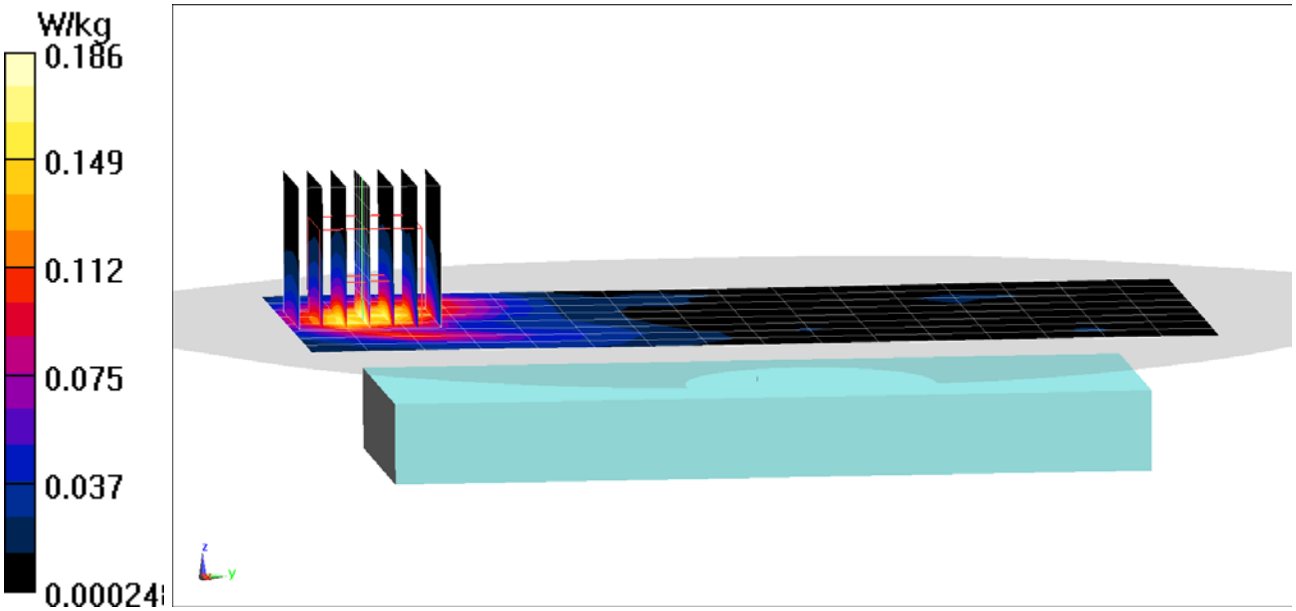
Communication System: UID 0, LTE Band 41; Frequency: 2593 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body Medium parameters used (interpolated):
f = 2593 MHz; σ = 2.164 S/m; ε_r = 52.195; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05-06-2019; Ambient Temp: 21.9°C; Tissue Temp: 20.7°C

Probe: EX3DV4 - SN7308; ConvF(7.4, 7.4, 7.4) @ 2593 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 41, Body SAR, Back side, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.630 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.234 W/kg
SAR(1 g) = 0.115 W/kg



DUT: A3LSMF907B; Type: Portable Handset; Serial: 1874M

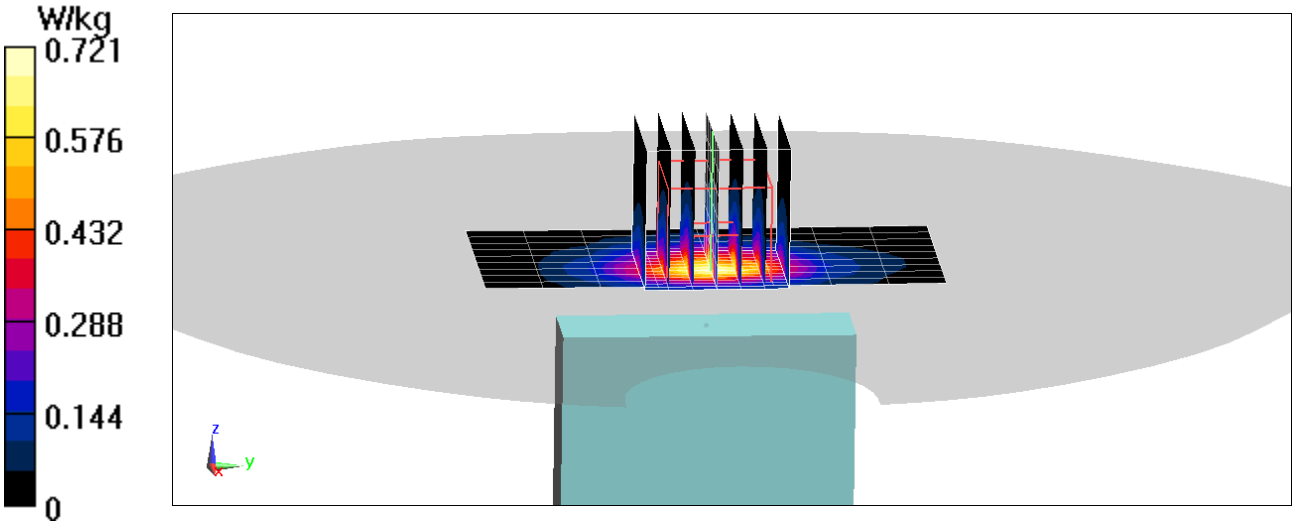
Communication System: UID 0, LTE Band 41; Frequency: 2636.5 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body Medium parameters used (interpolated):
$f = 2636.5$ MHz; $\sigma = 2.205$ S/m; $\varepsilon_r = 52.127$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-06-2019; Ambient Temp: 21.9°C; Tissue Temp: 20.7°C

Probe: EX3DV4 - SN7308; ConvF(7.4, 7.4, 7.4) @ 2636.5 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 41, Body SAR, Bottom Edge, Mid-High.ch,
20 MHz Bandwidth, QPSK, 50 RB, 25 RB Offset

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.56 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.827 W/kg
SAR(1 g) = 0.418 W/kg



DUT: A3LSMF907B; Type: Portable Handset; Serial: 1921M

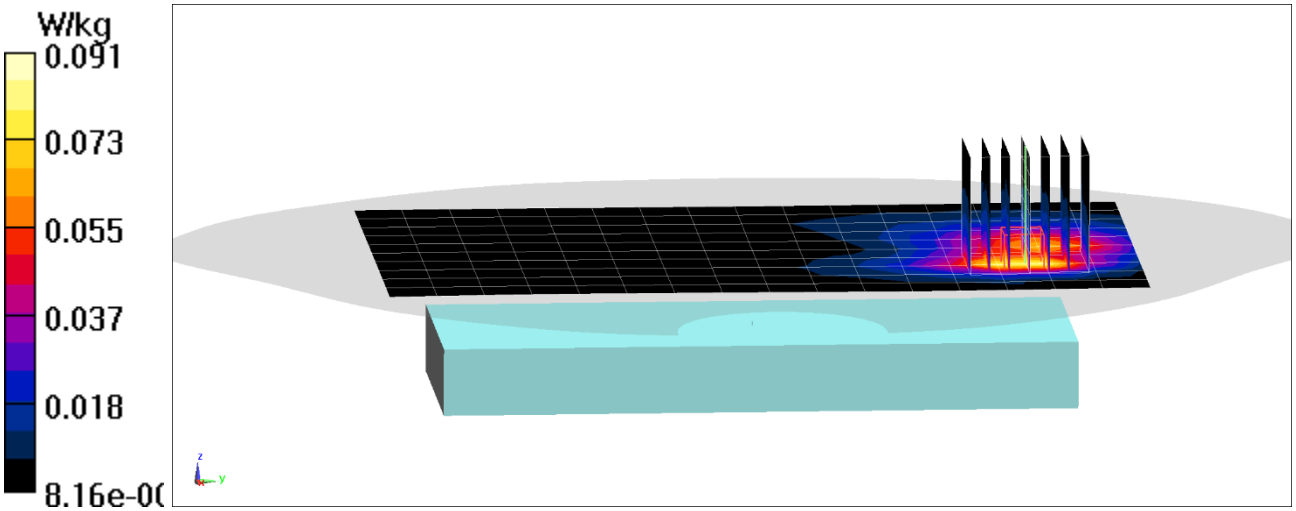
Communication System: UID 0, _IEEE 802.11b; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2412 MHz; σ = 1.99 S/m; ε_r = 52.18; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05-16-2019; Ambient Temp: 23.4°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2412 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: Right Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1797
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11b Antenna 2, 22 MHz Bandwidth,
Body SAR, Ch 1, 1 Mbps, Back Side

Area Scan (11x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.657 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.117 W/kg
SAR(1 g) = 0.056 W/kg



DUT: A3LSMF907B; Type: Portable Handset; Serial: 1921M

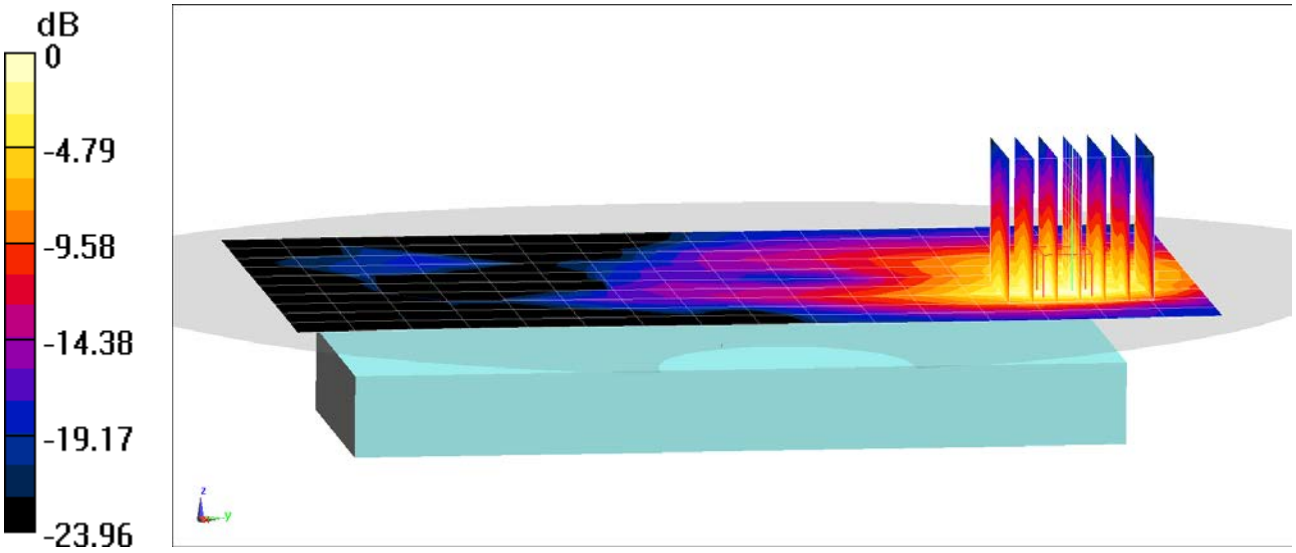
Communication System: UID 0, _IEEE 802.11b; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2412 MHz; σ = 1.99 S/m; ε_r = 52.18; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-16-2019; Ambient Temp: 23.4°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2412 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: Right Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1797
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11b Antenna 2, 22 MHz Bandwidth,
Body SAR, Ch 1, 1 Mbps, Back Side

Area Scan (11x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.408 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.366 W/kg
SAR(1 g) = 0.161 W/kg



0 dB = 0.275 W/kg = -5.61 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1968M

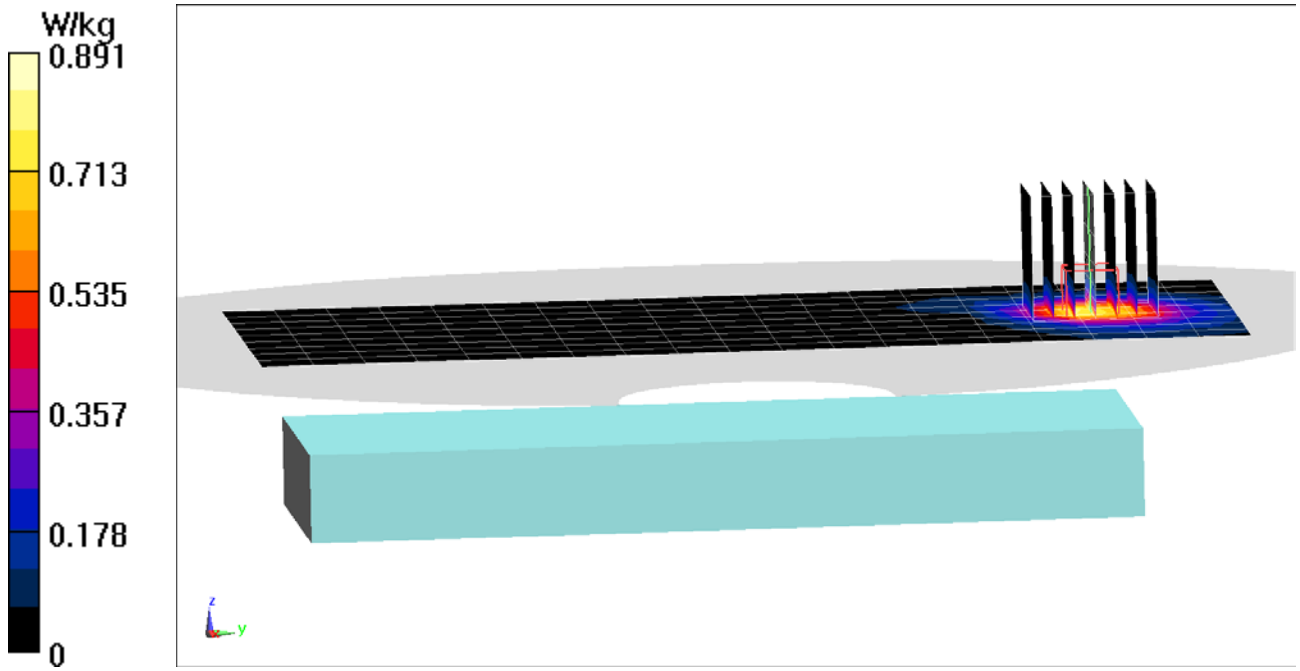
Communication System: UID 0, 802.11a 5.2-5.8 GHz Band; Frequency: 5500 MHz; Duty Cycle: 1:1
Medium: 5 GHz Body Medium parameters used:
f = 5500 MHz; σ = 5.755 S/m; ε_r = 47.318; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05-13-2019; Ambient Temp: 19.4°C; Tissue Temp: 20.1°C

Probe: EX3DV4 - SN7308; ConvF(4, 4, 4) @ 5500 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11a Antenna 1, UNII-2C, 20 MHz Bandwidth,
Body SAR, Ch 100, 6 Mbps, Back Side

Area Scan (10x20x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 8.371 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.375 W/kg



DUT: A3LSMF907B; Type: Portable Handset; Serial: 1968M

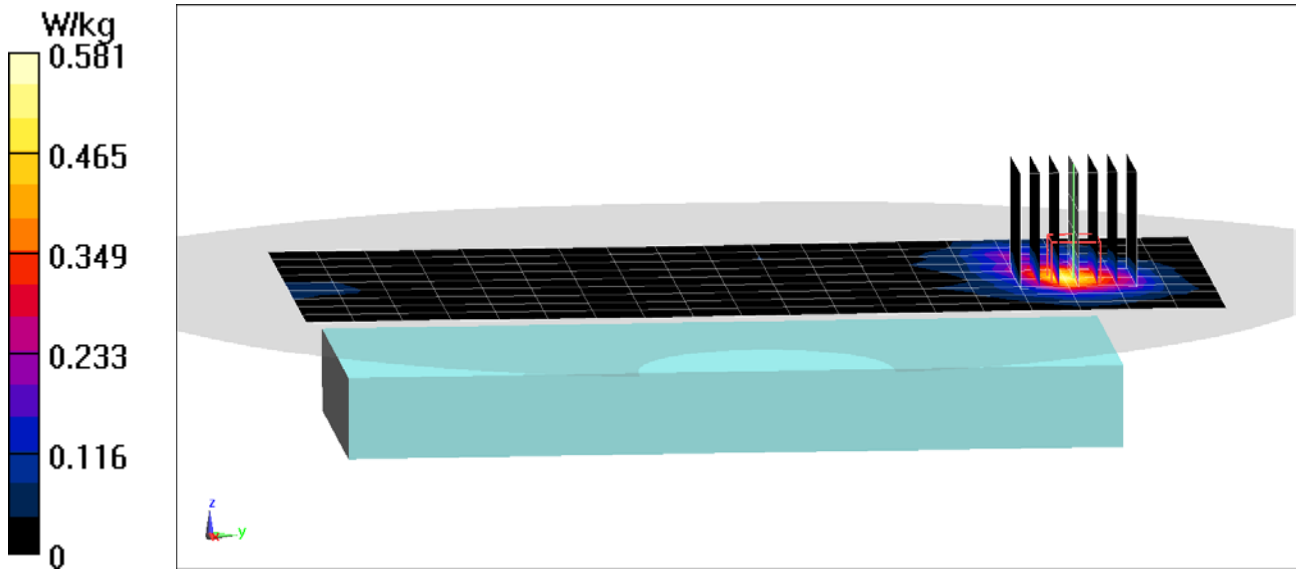
Communication System: UID 0, 802.11a 5.2-5.8 GHz Band; Frequency: 5785 MHz; Duty Cycle: 1:1
Medium: 5 GHz Body Medium parameters used:
f = 5785 MHz; σ = 6.192 S/m; ε_r = 46.762; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-13-2019; Ambient Temp: 19.4°C; Tissue Temp: 20.1°C

Probe: EX3DV4 - SN7308; ConvF(4.18, 4.18, 4.18) @ 5785 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11a Antenna 1, UNII-3, 20 MHz Bandwidth,
Body SAR, Ch 157, 6 Mbps, Back Side

Area Scan (10x20x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 6.187 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.974 W/kg
SAR(1 g) = 0.216 W/kg



DUT: A3LSMF907B; Type: Portable Handset; Serial: 1921M

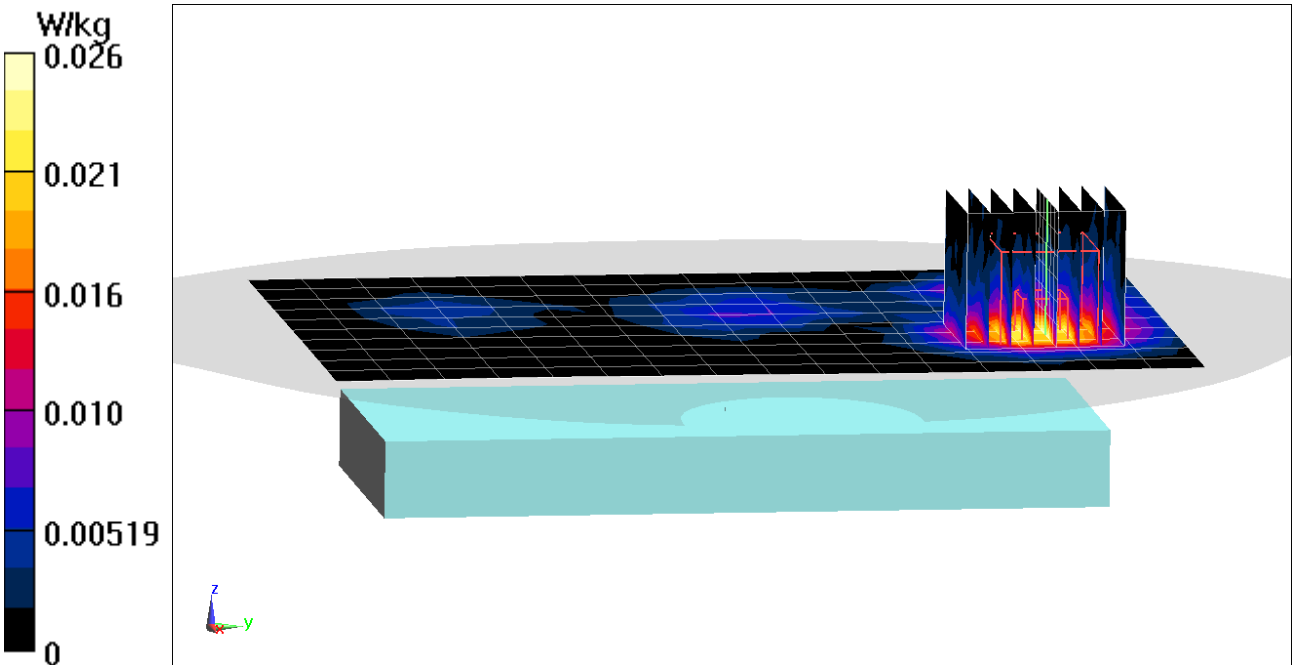
Communication System: UID 0, Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body Medium parameters used (interpolated):
$f = 2402$ MHz; $\sigma = 1.987$ S/m; $\varepsilon_r = 51.7$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05-08-2019; Ambient Temp: 23.7°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2402 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: Right Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1797
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Bluetooth, Body SAR, Ch 0, 1 Mbps, Back Side

Area Scan (11x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.863 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.0320 W/kg
SAR(1 g) = 0.016 W/kg



DUT: A3LSMF907B; Type: Portable Handset; Serial: 1921M

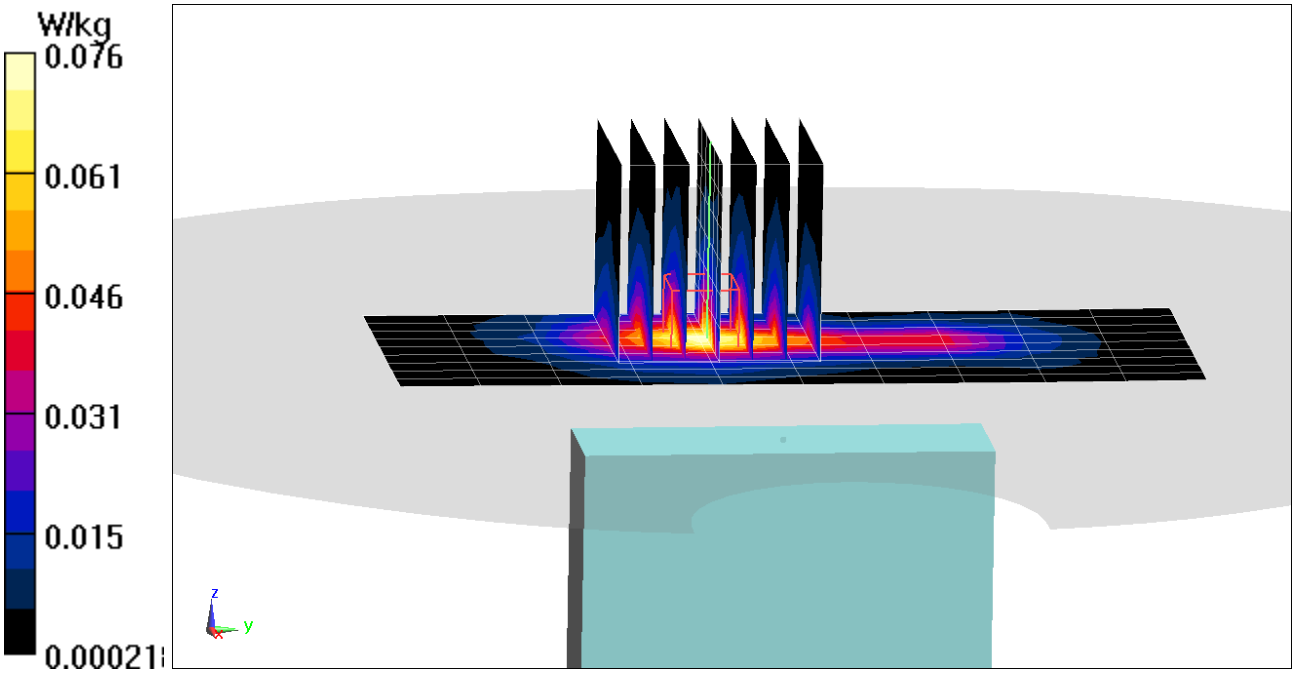
Communication System: UID 0, Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body Medium parameters used (interpolated):
f = 2402 MHz; σ = 1.987 S/m; ε_r = 51.7; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-08-2019; Ambient Temp: 23.7°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2402 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: Right Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1797
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Bluetooth, Body SAR, Ch 0, 1 Mbps, Top Edge

Area Scan (10x11x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.343 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.0930 W/kg
SAR(1 g) = 0.047 W/kg



DUT: A3LSMF907B; Type: Portable Handset; Serial: 1908M

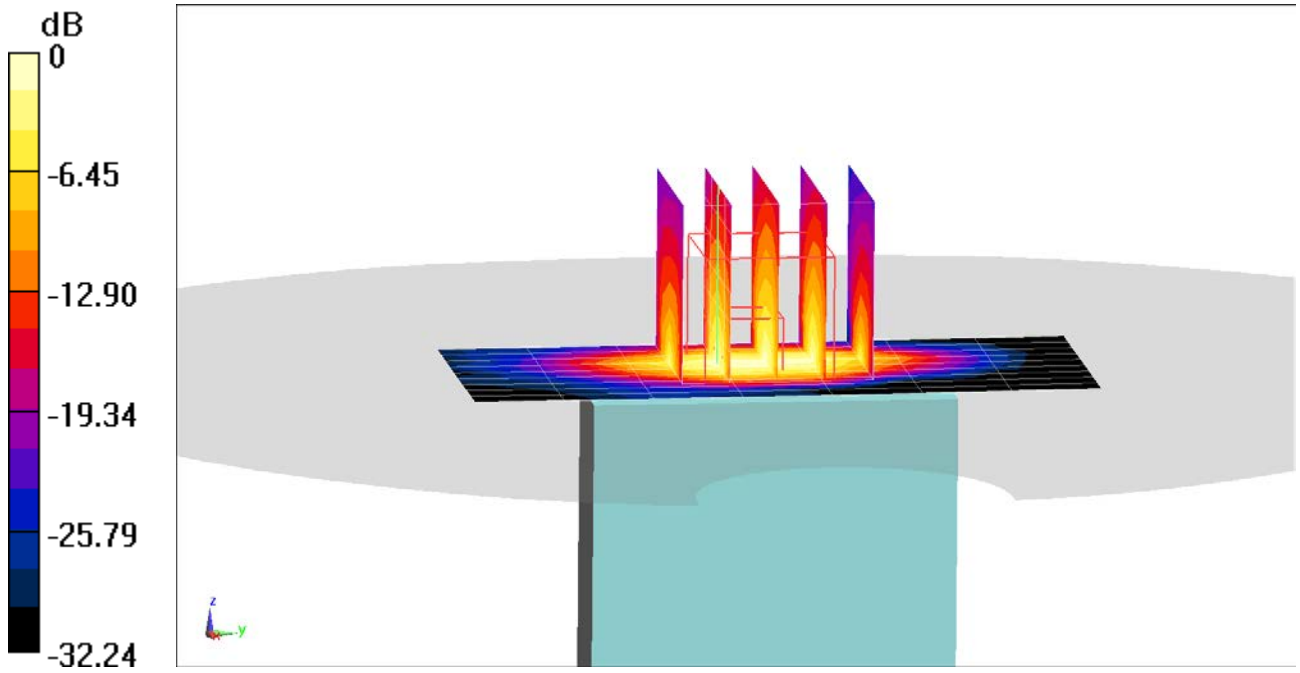
Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 1850.2 MHz; Duty Cycle: 1:2.76
Medium: 1900 Body Medium parameters used (interpolated):
f = 1850.2 MHz; σ = 1.485 S/m; ε_r = 52.046; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-08-2019; Ambient Temp: 23.5°C; Tissue Temp: 21.6°C

Probe: EX3DV4 - SN7357; ConvF(7.93, 7.93, 7.93) @ 1850.2 MHz; Calibrated: 4/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/18/2019
Phantom: Twin-SAM V4.0 Front Right; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 1900, Phablet SAR, Bottom Edge, Low.ch, 3 Tx Slots

Area Scan (10x8x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 61.28 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 12.9 W/kg
SAR(10 g) = 2.31 W/kg



0 dB = 9.83 W/kg = 9.93 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1875M

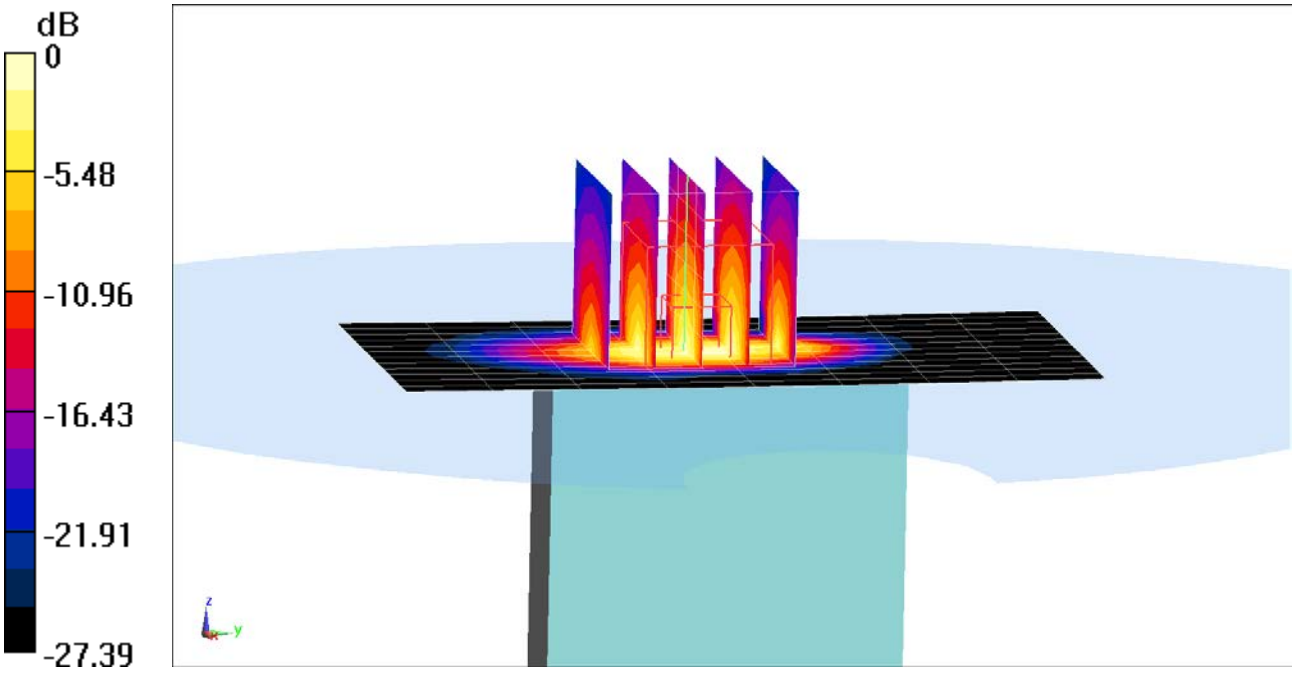
Communication System: UID 0, UMTS; Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1752.6 MHz; σ = 1.498 S/m; ε_r = 52.186; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-06-2019; Ambient Temp: 22.2°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN3914; ConvF(7.89, 7.89, 7.89) @ 1752.6 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1750, Phablet SAR, Bottom Edge, High.ch

Area Scan (13x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 61.41 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 12.1 W/kg
SAR(10 g) = 2.13 W/kg



0 dB = 9.54 W/kg = 9.80 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1897M

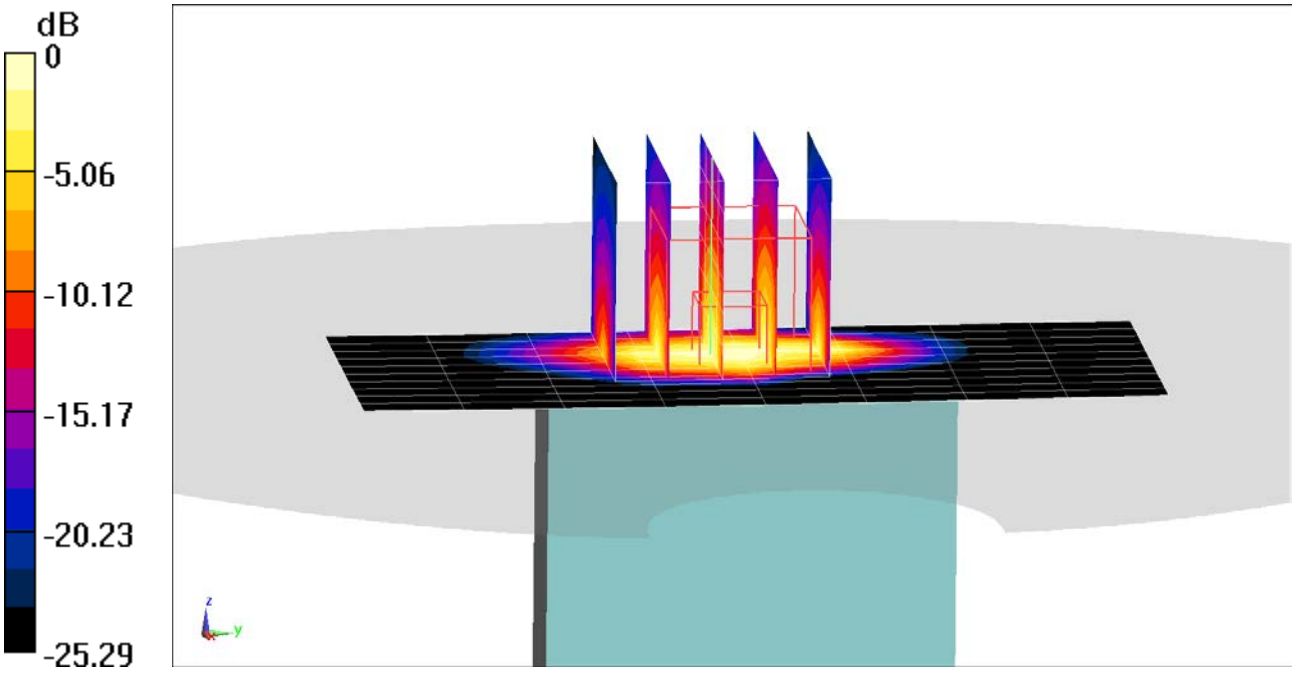
Communication System: UID 0, UMTS; Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1907.6 MHz; σ = 1.529 S/m; ε_r = 52.158; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-06-2019; Ambient Temp: 22.0°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(7.93, 7.93, 7.93) @ 1907.6 MHz; Calibrated: 4/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/18/2019
Phantom: Twin-SAM V4.0 Front Right; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1900, Phablet SAR, Bottom Edge, High.ch

Area Scan (11x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 63.07 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 12.8 W/kg
SAR(10 g) = 2.37 W/kg



0 dB = 9.85 W/kg = 9.93 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1908M

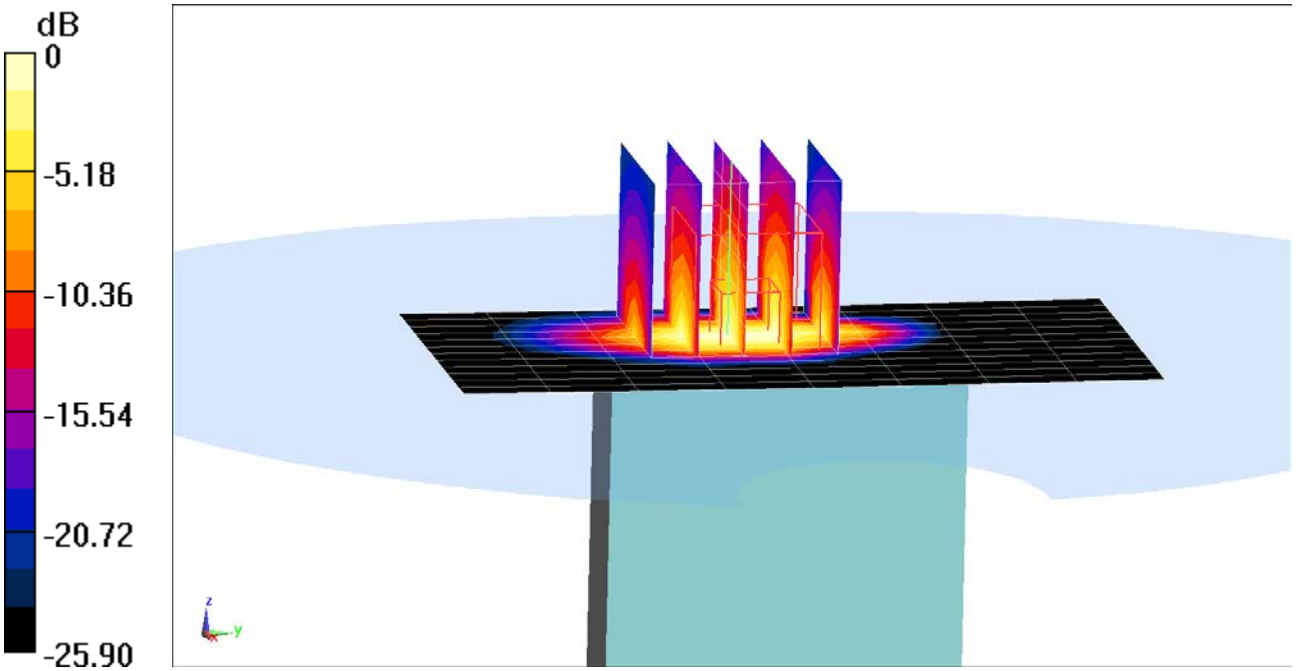
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1745 MHz; σ = 1.492 S/m; ε_r = 52.505; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-01-2019; Ambient Temp: 22.3°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN3914; ConvF(7.89, 7.89, 7.89) @ 1745 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS), Phablet SAR, Bottom Edge, Mid.ch, 20 MHz Bandwidth, QPSK, 50 RB, 25 RB Offset

Area Scan (13x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 66.33 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 13.3 W/kg
SAR(10 g) = 2.57 W/kg



0 dB = 10.5 W/kg = 10.21 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1908M

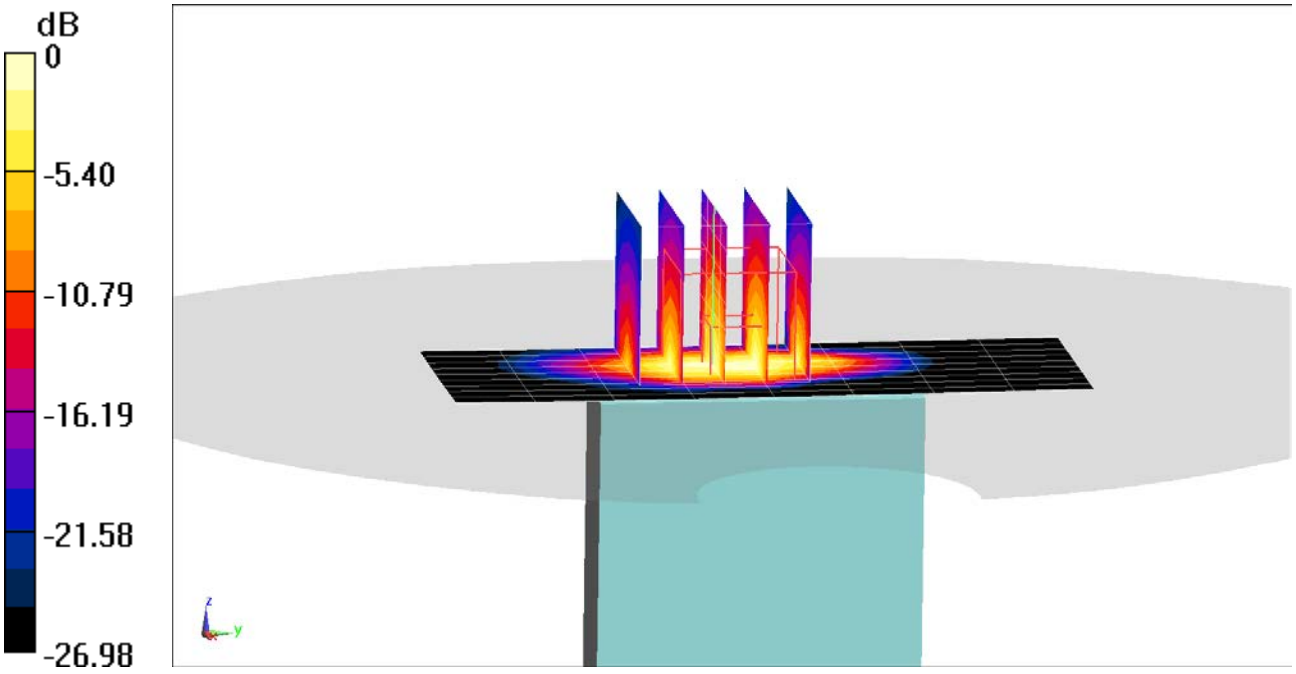
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1905 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1905 MHz; σ = 1.526 S/m; ε_r = 52.166; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-06-2019; Ambient Temp: 22.0°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(7.93, 7.93, 7.93) @ 1905 MHz; Calibrated: 4/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/18/2019
Phantom: Twin-SAM V4.0 Front Right; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 25 (PCS), Phablet SAR, Bottom Edge, High.ch, 20 MHz Bandwidth, QPSK, 50 RB, 50 RB Offset

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 62.70 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 13.6 W/kg
SAR(10 g) = 2.31 W/kg



0 dB = 10.1 W/kg = 10.04 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1874M

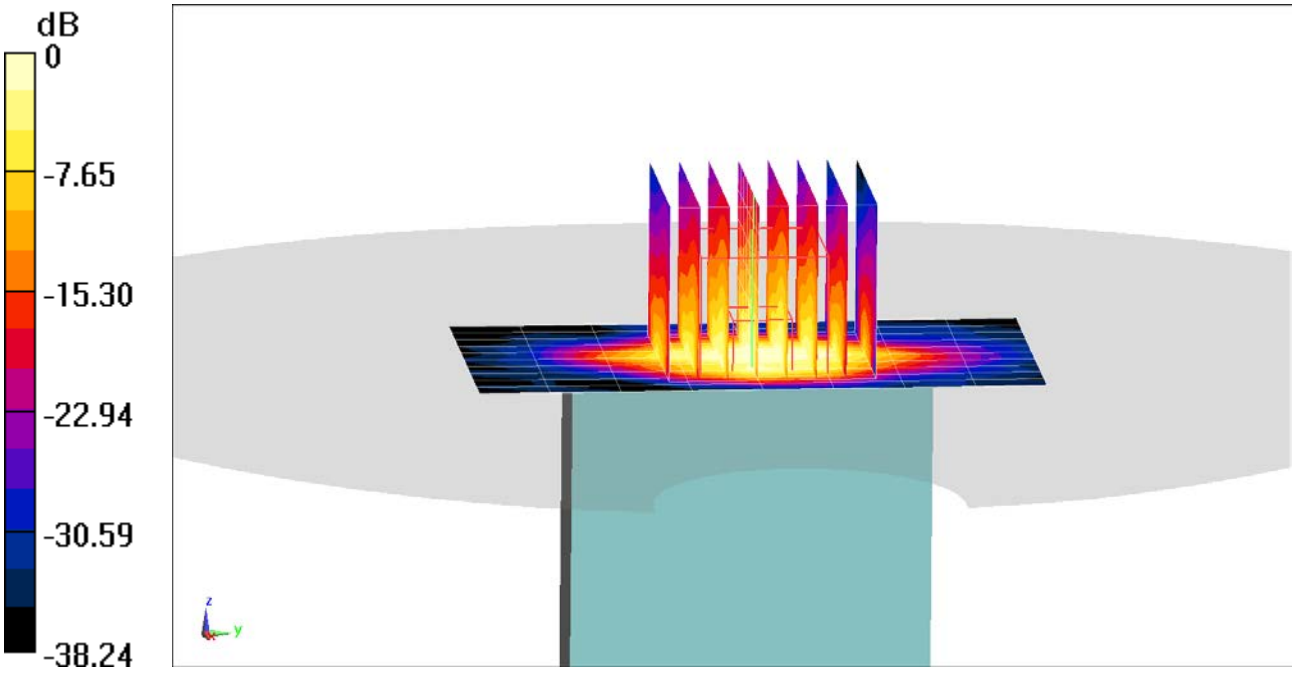
Communication System: UID 0, _LTE Band 41; Frequency: 2506 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body Medium parameters used (interpolated):
$f = 2506$ MHz; $\sigma = 2.085$ S/m; $\varepsilon_r = 52.238$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-08-2019; Ambient Temp: 21.6°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7308; ConvF(7.57, 7.57, 7.57) @ 2506 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 41, Phablet SAR, Bottom Edge, Low.ch,
20 MHz Bandwidth, QPSK, 50 RB, 25 RB Offset

Area Scan (11x9x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 39.85 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 11.2 W/kg
SAR(10 g) = 1.9 W/kg



0 dB = 8.51 W/kg = 9.30 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1968M

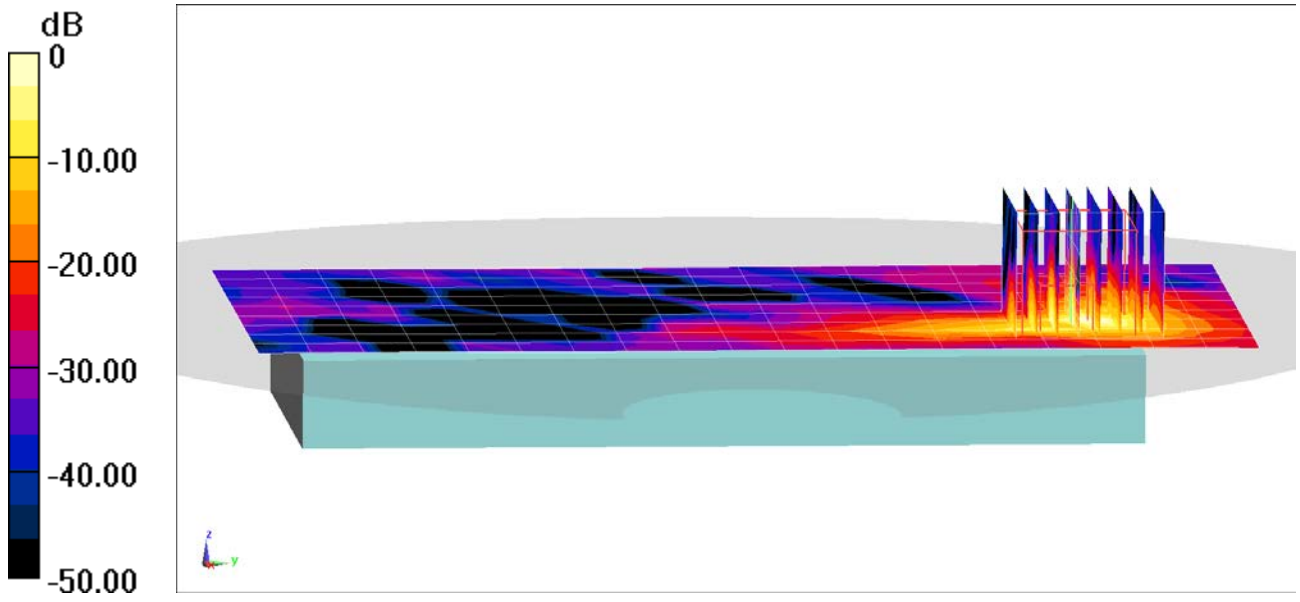
Communication System: UID 0, 802.11a 5.2-5.8 GHz Band; Frequency: 5720 MHz; Duty Cycle: 1:1
Medium: 5 GHz Body Medium parameters used (interpolated):
f = 5720 MHz; σ = 6.094 S/m; ε_r = 46.902; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-13-2019; Ambient Temp: 19.4°C; Tissue Temp: 20.1°C

Probe: EX3DV4 - SN7308; ConvF(4.18, 4.18, 4.18) @ 5720 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11a Antenna 2, UNII-2C, 20 MHz Bandwidth, Phablet SAR, Ch 144, 6 Mbps, Back Side

Area Scan (10x20x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 35.34 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 63.9 W/kg
SAR(10 g) = 1.06 W/kg



0 dB = 20.8 W/kg = 13.18 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1954M

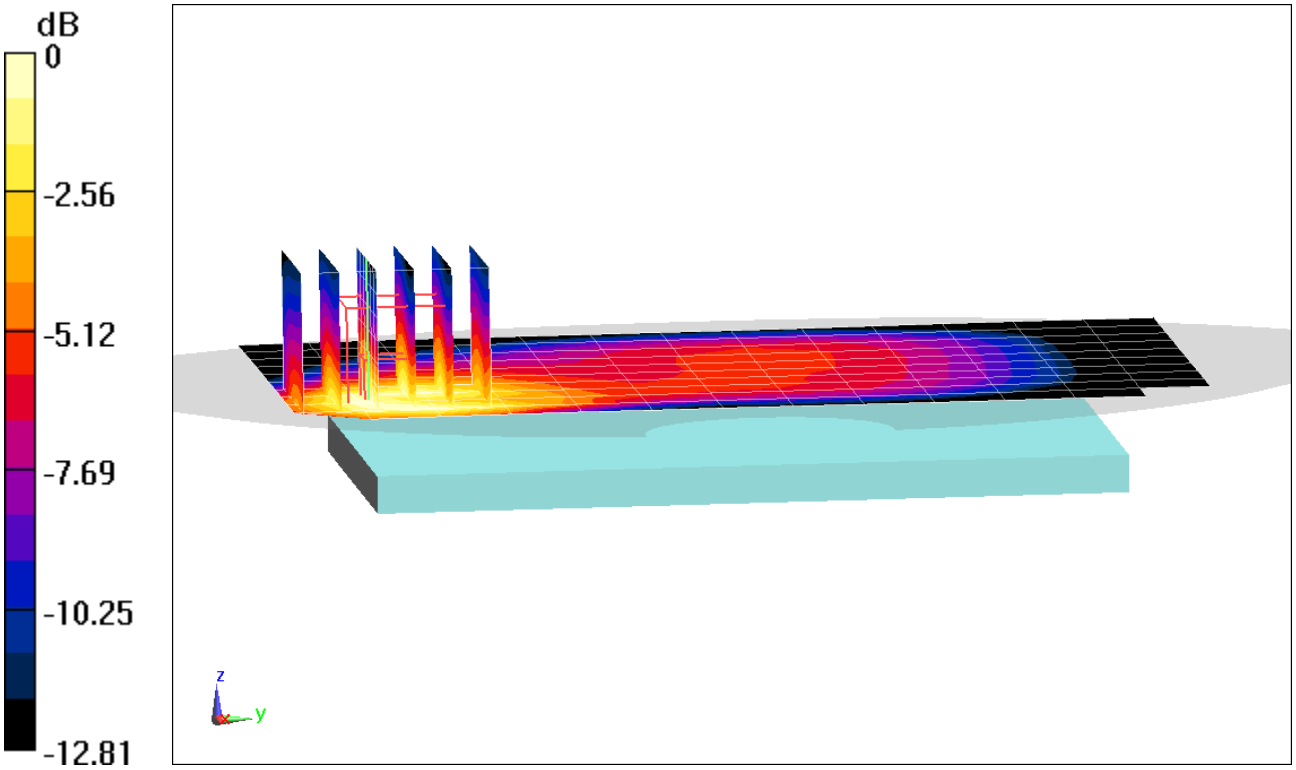
Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 836.6 MHz; Duty Cycle: 1:2.76
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.984 S/m; ε_r = 54.282; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 5-8-2019; Ambient Temp: 21.9°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 836.6 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 850, UMPC Body SAR, Front side, Mid.ch, 3 Tx Slots

Area Scan (11x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (7x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.23 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.804 W/kg
SAR(1 g) = 0.472 W/kg



0 dB = 0.671 W/kg = -1.73 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1908M

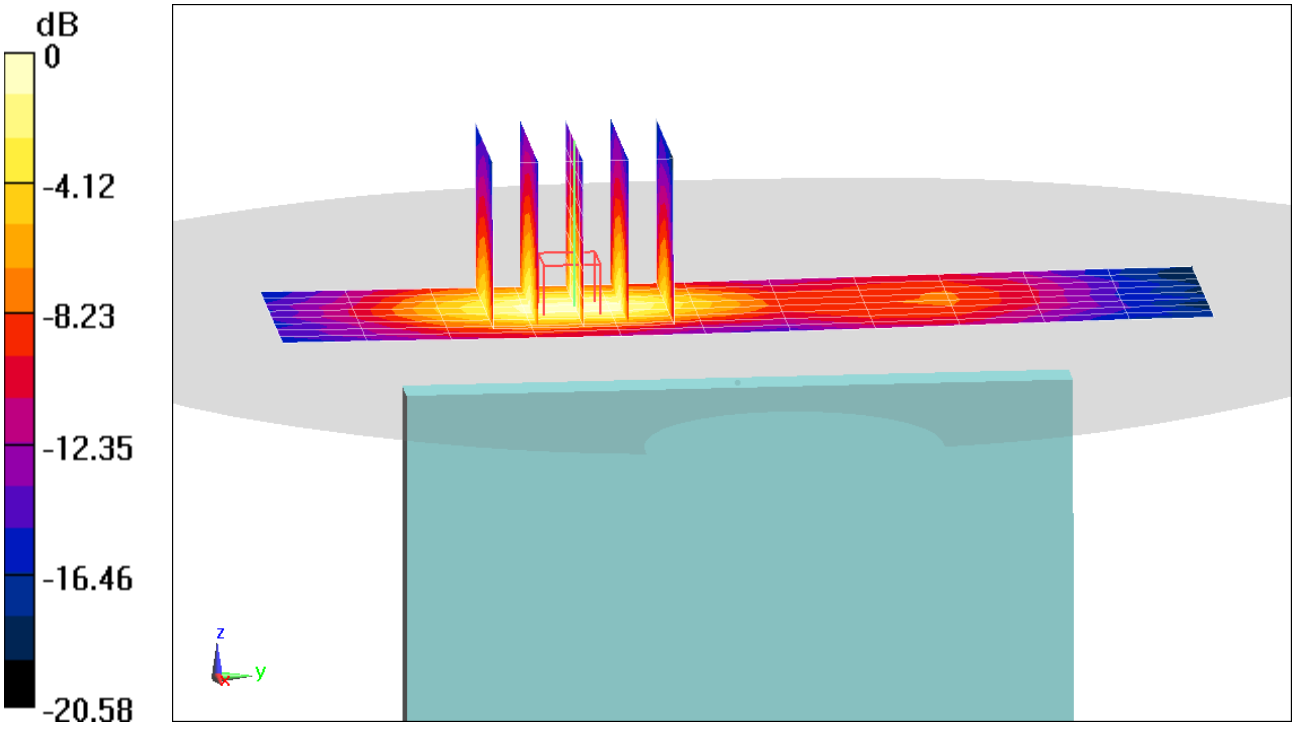
Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 1880 MHz; Duty Cycle: 1:2.76
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.518 S/m; ε_r = 51.958; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-08-2019; Ambient Temp: 23.5°C; Tissue Temp: 21.6°C

Probe: EX3DV4 - SN7357; ConvF(7.93, 7.93, 7.93) @ 1880 MHz; Calibrated: 4/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/18/2019
Phantom: Twin-SAM V4.0 Front Right; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 1900, UMPC Body SAR, Bottom Edge, Mid.ch, 3 Tx Slots

Area Scan (9x12x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.02 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.08 W/kg
SAR(1 g) = 0.586 W/kg



0 dB = 0.914 W/kg = -0.39 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1940M

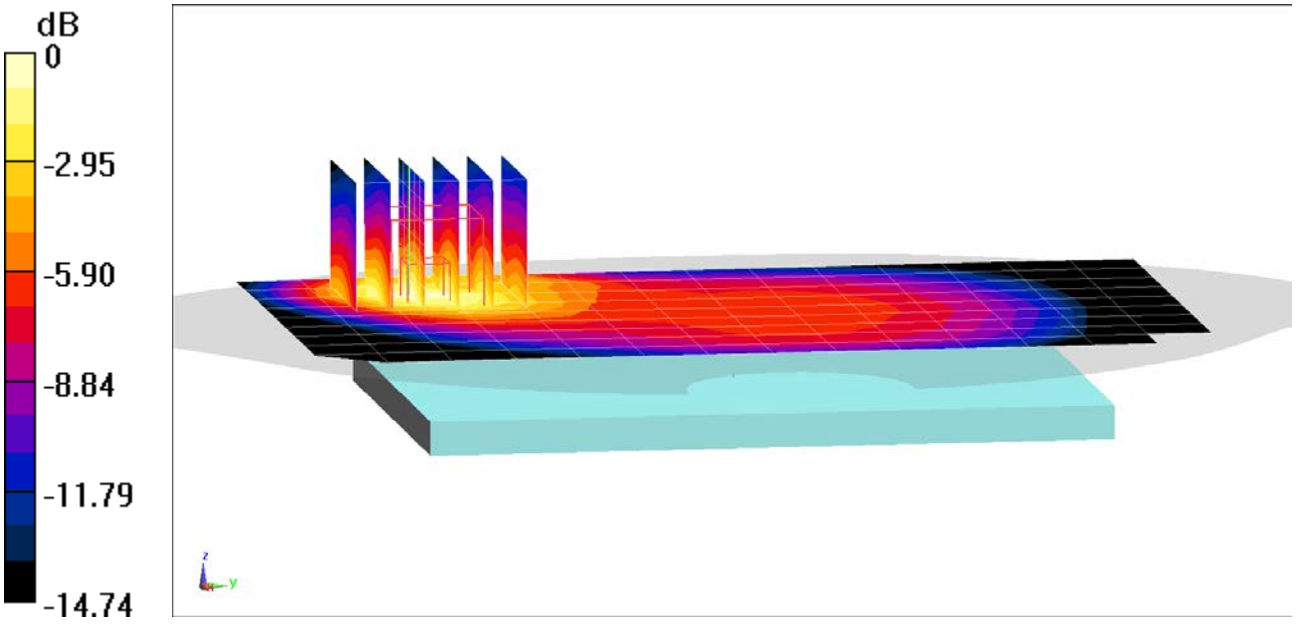
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.984 S/m; ε_r = 54.069; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-10-2019; Ambient Temp: 20.5°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 836.6 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 850, UMPC Body SAR, Back side, Mid.ch

Area Scan (10x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.40 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.567 W/kg



0 dB = 0.825 W/kg = -0.84 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1875M

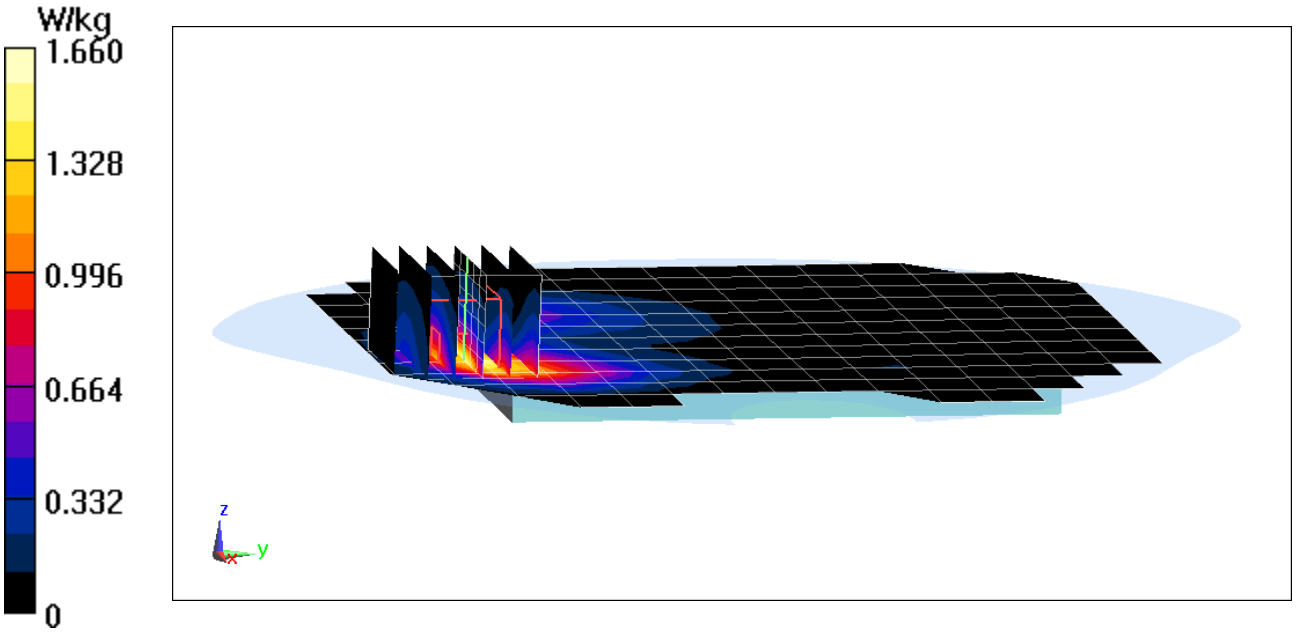
Communication System: UID 0, UMTS; Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1752.6 MHz; σ = 1.498 S/m; ε_r = 52.186; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-06-2019; Ambient Temp: 22.2°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN3914; ConvF(7.89, 7.89, 7.89) @ 1752.6 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1750, UMPC Body SAR, Front side, High.ch

Area Scan (15x19x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.83 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 2.04 W/kg
SAR(1 g) = 1.11 W/kg



DUT: A3LSMF907B; Type: Portable Handset; Serial: 1897M

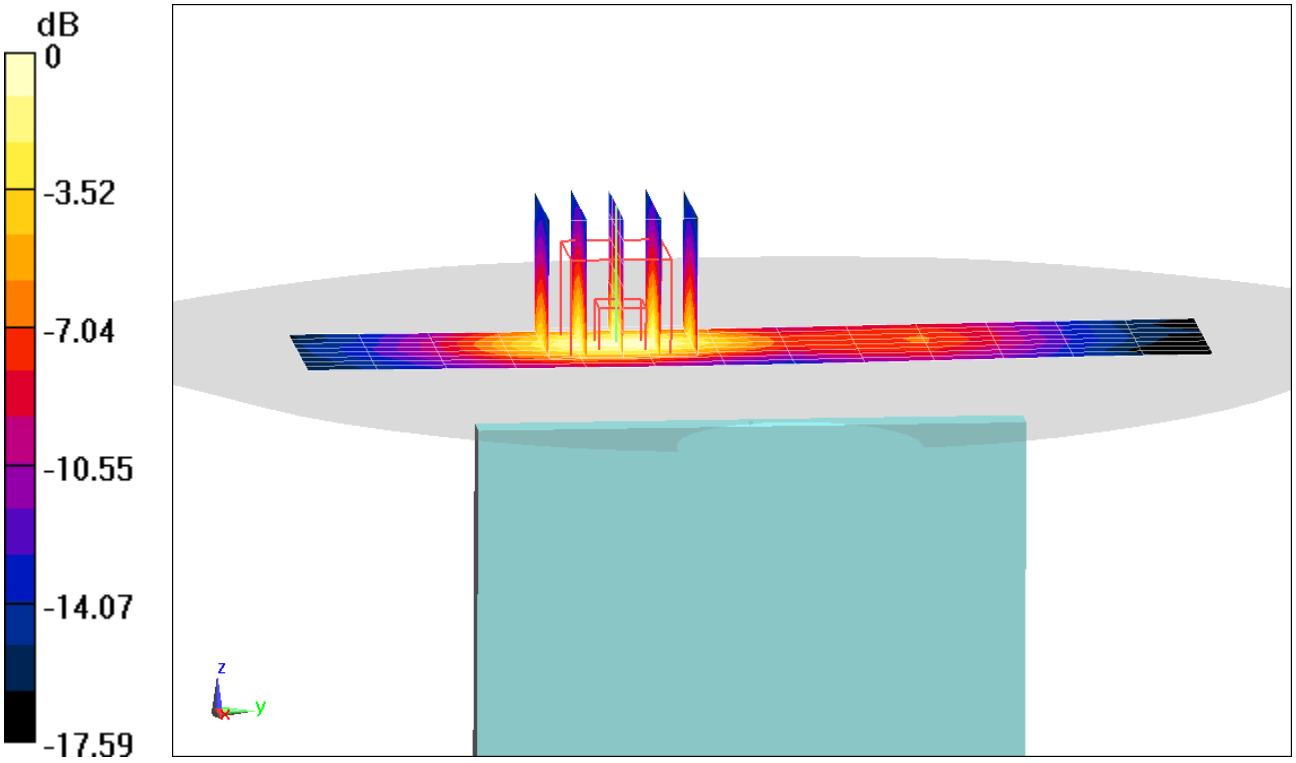
Communication System: UID 0, UMTS; Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1907.6 MHz; σ = 1.529 S/m; ε_r = 52.158; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.3 cm

Test Date: 05-06-2019; Ambient Temp: 22.0°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(7.93, 7.93, 7.93) @ 1907.6 MHz; Calibrated: 4/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/18/2019
Phantom: Twin-SAM V4.0 Front Right; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1900, UMPC Body SAR, Bottom Edge, High.ch

Area Scan (9x14x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.67 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.56 W/kg
SAR(1 g) = 0.895 W/kg



0 dB = 1.33 W/kg = 1.24 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1954M

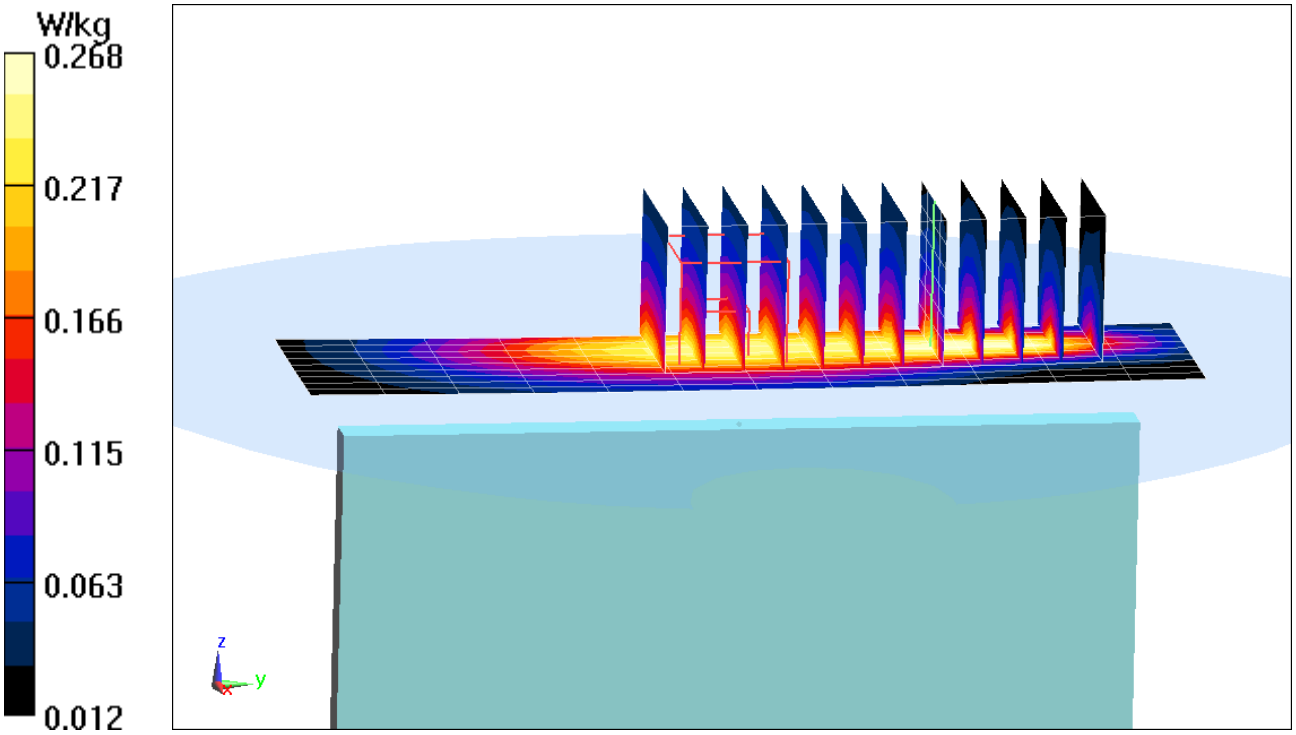
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.933 S/m; ε_r = 54.27; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-14-2019; Ambient Temp: 23.5°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7410; ConvF(9.87, 9.87, 9.87) @ 707.5 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 12, UMPC Body SAR, Right Edge, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 25 RB Offset

Area Scan (10x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x12x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.67 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.308 W/kg
SAR(1 g) = 0.196 W/kg



DUT: A3LSMF907B; Type: Portable Handset; Serial: 1954M

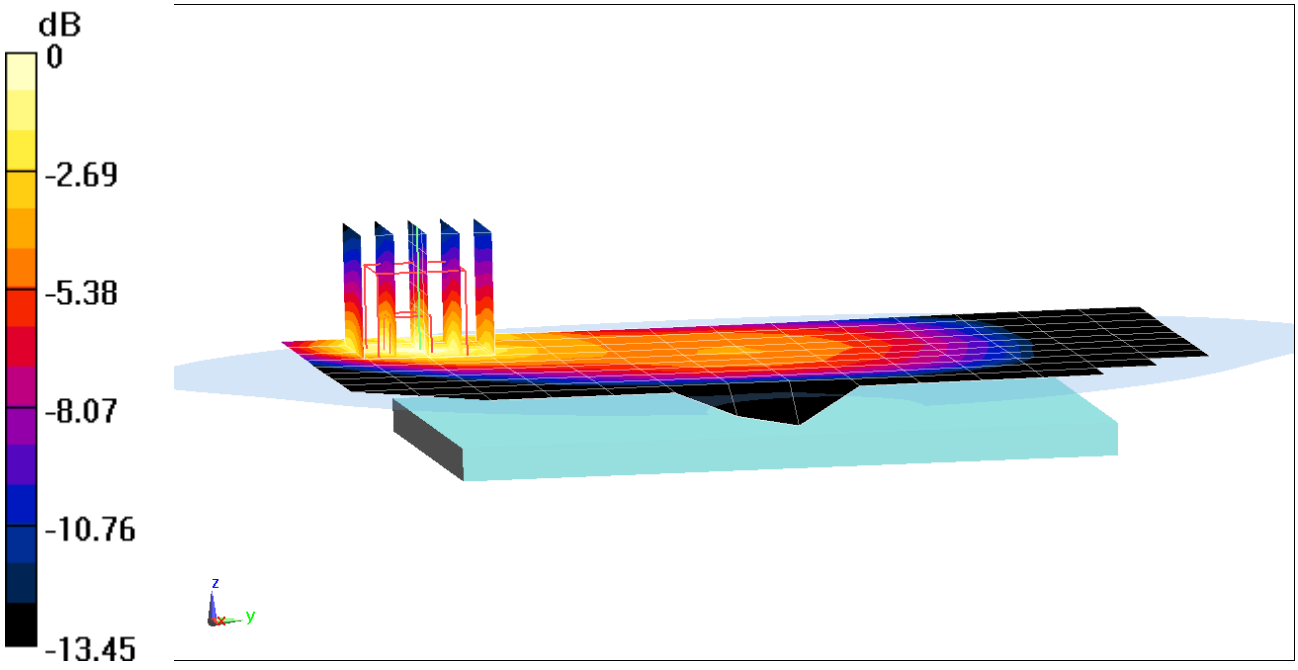
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 782 MHz; σ = 0.999 S/m; ε_r = 53.585; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-14-2019; Ambient Temp: 23.5°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7410; ConvF(9.87, 9.87, 9.87) @ 782 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 13, UMPC Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.71 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.383 W/kg
SAR(1 g) = 0.224 W/kg



0 dB = 0.318 W/kg = -4.98 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1940M

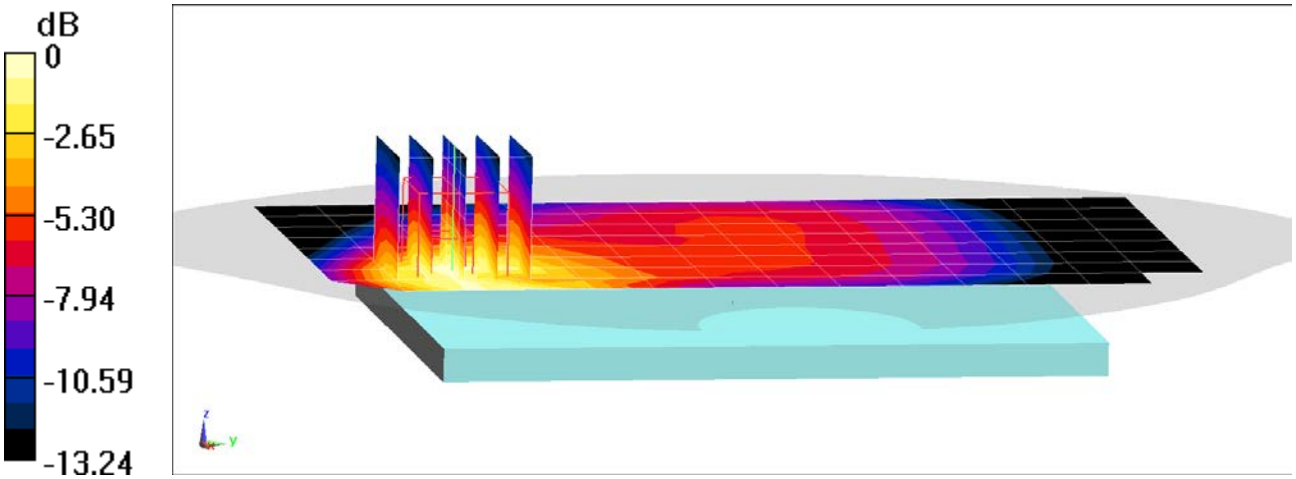
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 831.5 MHz; σ = 1.002 S/m; ε_r = 53.019; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date:06-05-2019; Ambient Temp: 22.7°C; Tissue Temp: 20.2°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 831.5 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 26 (Cell.), UMPC Body SAR, Front side, Mid.ch, 15 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.82 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.819 W/kg
SAR(1 g) = 0.482 W/kg



0 dB = 0.696 W/kg = -1.57 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1875M

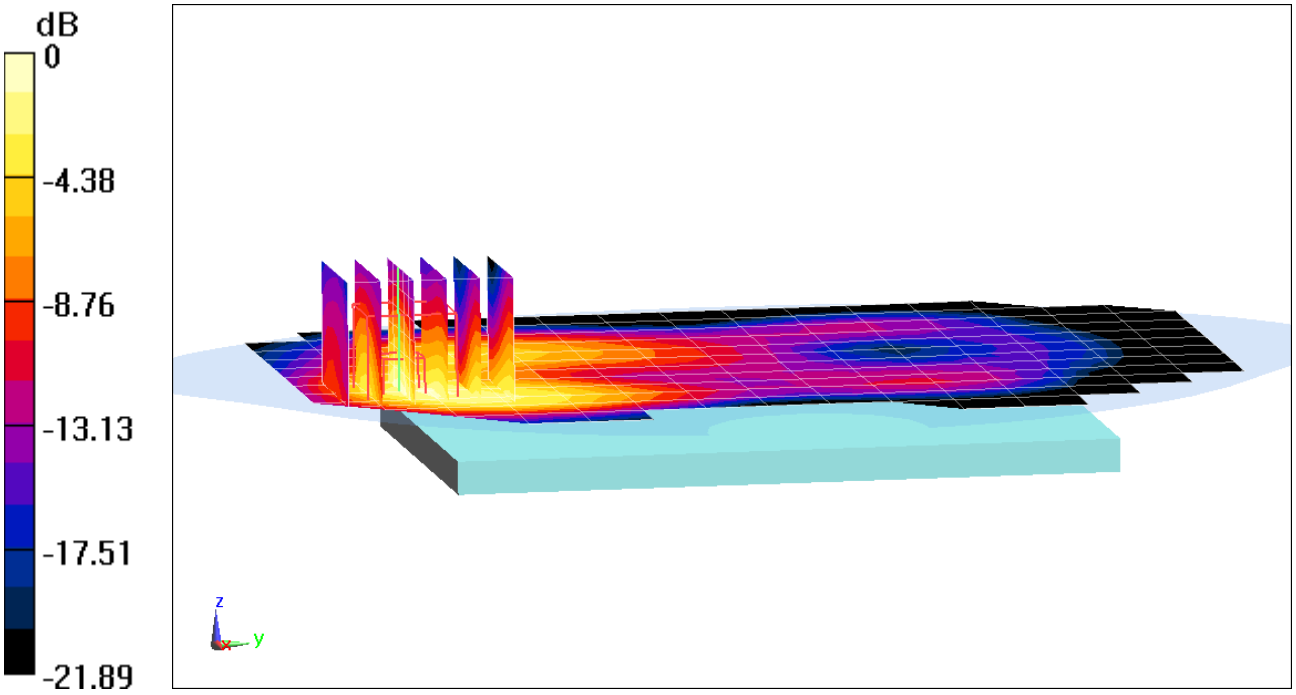
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1770 MHz; σ = 1.517 S/m; ε_r = 52.111; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-06-2019; Ambient Temp: 22.2°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN3914; ConvF(7.89, 7.89, 7.89) @ 1770 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS), UMPC Body SAR, Front side, High.ch, 20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (13x16x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.07 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.87 W/kg
SAR(1 g) = 1.03 W/kg



0 dB = 1.58 W/kg = 1.99 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1908M

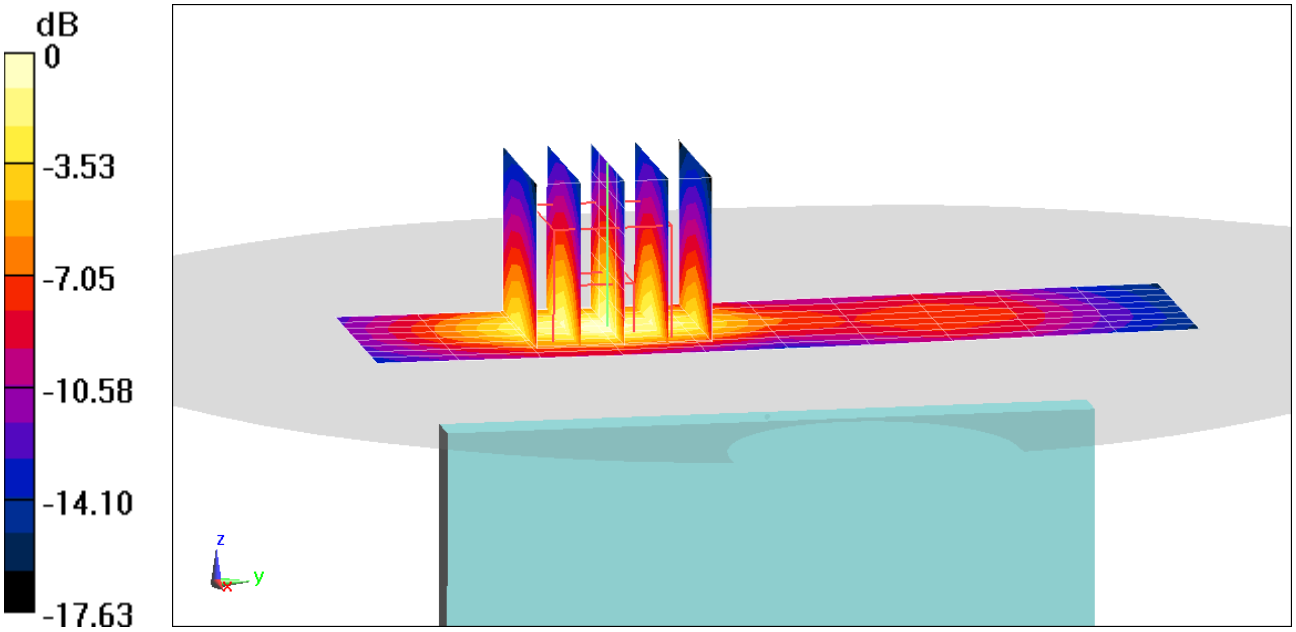
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1905 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1905 MHz; σ = 1.526 S/m; ε_r = 52.166; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.3 cm

Test Date: 05-06-2019; Ambient Temp: 22.0°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(7.93, 7.93, 7.93) @ 1905 MHz; Calibrated: 4/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/18/2019
Phantom: Twin-SAM V4.0 Front Right; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 25 (PCS), UMPC Body SAR, Bottom Edge, High.ch, 20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset

Area Scan (9x11x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.15 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.64 W/kg
SAR(1 g) = 0.935 W/kg



0 dB = 1.39 W/kg = 1.43 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1874M

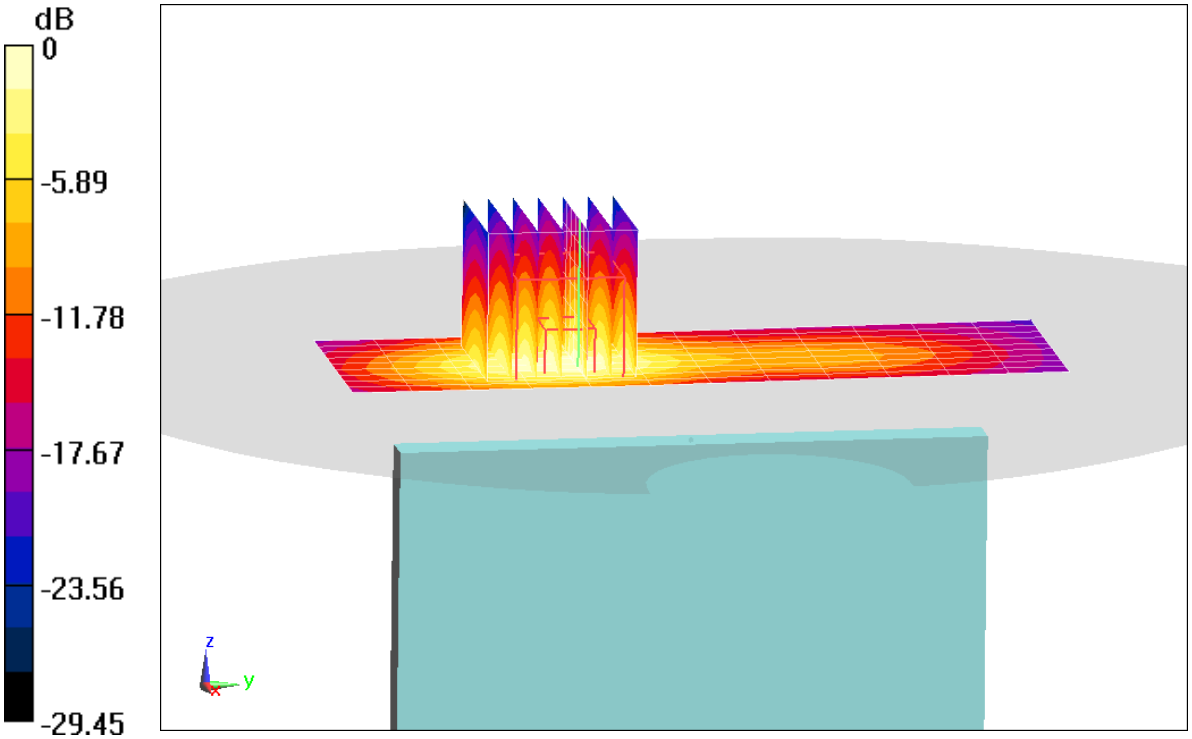
Communication System: UID 0, LTE Band 41; Frequency: 2680 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body Medium parameters used (interpolated):
f = 2680 MHz; σ = 2.255 S/m; ε_r = 51.958; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.3 cm

Test Date: 05-08-2019; Ambient Temp: 21.6°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7308; ConvF(7.4, 7.4, 7.4) @ 2680 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 41, UMPC Body SAR, Bottom Edge, High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset

Area Scan (10x13x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.59 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 1.62 W/kg
SAR(1 g) = 0.766 W/kg



0 dB = 1.25 W/kg = 0.97 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1921M

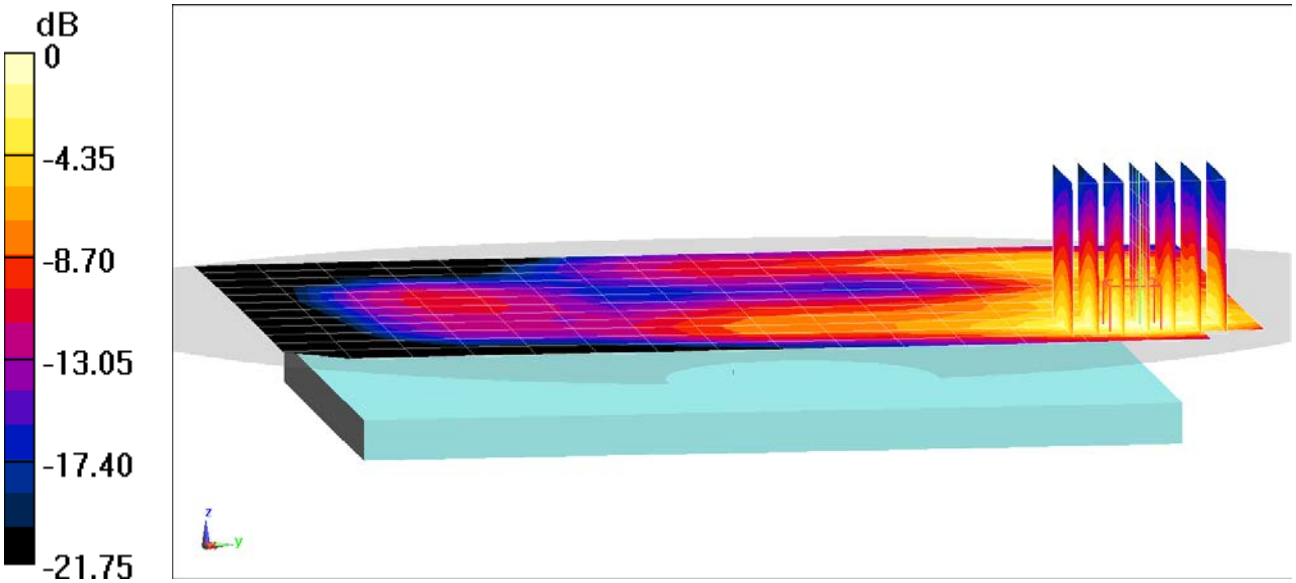
Communication System: UID 0, IEEE 802.11b; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2412 MHz; σ = 1.982 S/m; ε_r = 52.592; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-20-2019; Ambient Temp: 23.0°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2412 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11b Antenna 1, 22 MHz Bandwidth,
UMPC Body SAR, Ch 1, 1 Mbps, Front Side

Area Scan (13x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.837 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.679 W/kg
SAR(1 g) = 0.316 W/kg



0 dB = 0.510 W/kg = -2.92 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1968M

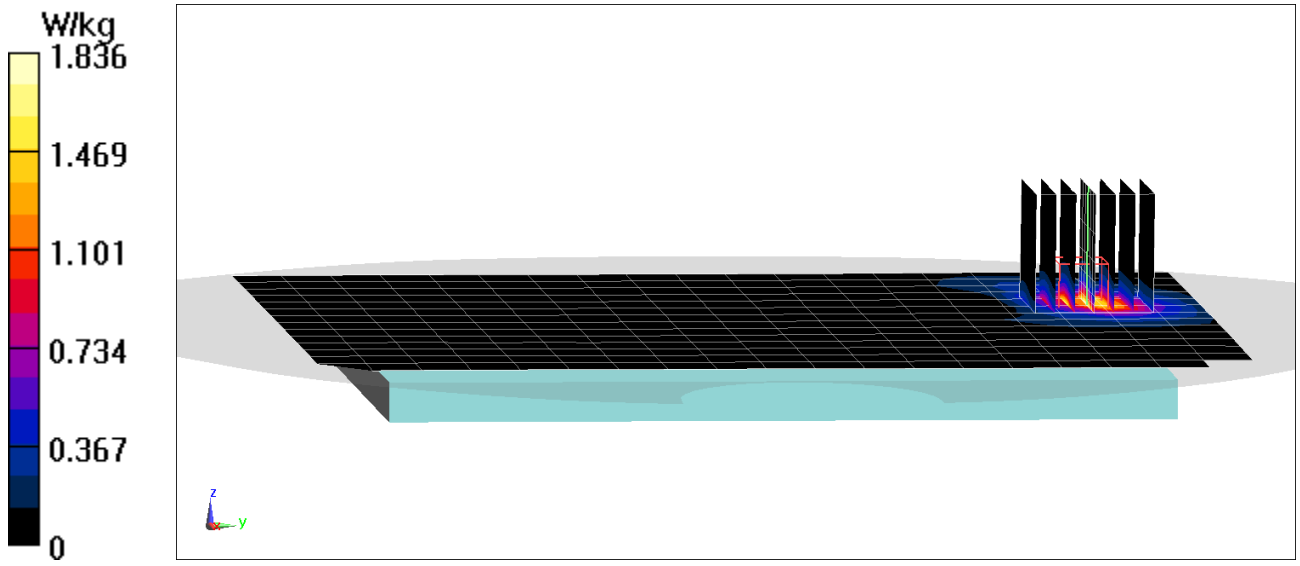
Communication System: UID 0, 802.11n 5.2-5.8 GHz Band; Frequency: 5620 MHz; Duty Cycle: 1:1
Medium: 5 GHz Body Medium parameters used:
f = 5620 MHz; σ = 5.935 S/m; ε_r = 47.068; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-13-2019; Ambient Temp: 19.4°C; Tissue Temp: 20.1°C

Probe: EX3DV4 - SN7308; ConvF(4, 4, 4) @ 5620 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11n MIMO, UNII-2C, 20 MHz Bandwidth,
UMPC Body SAR, Ch 124, 13 Mbps, Back Side

Area Scan (15x20x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 11.74 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 3.10 W/kg
SAR(1 g) = 0.765 W/kg



DUT: A3LSMF907B; Type: Portable Handset; Serial: 1921M

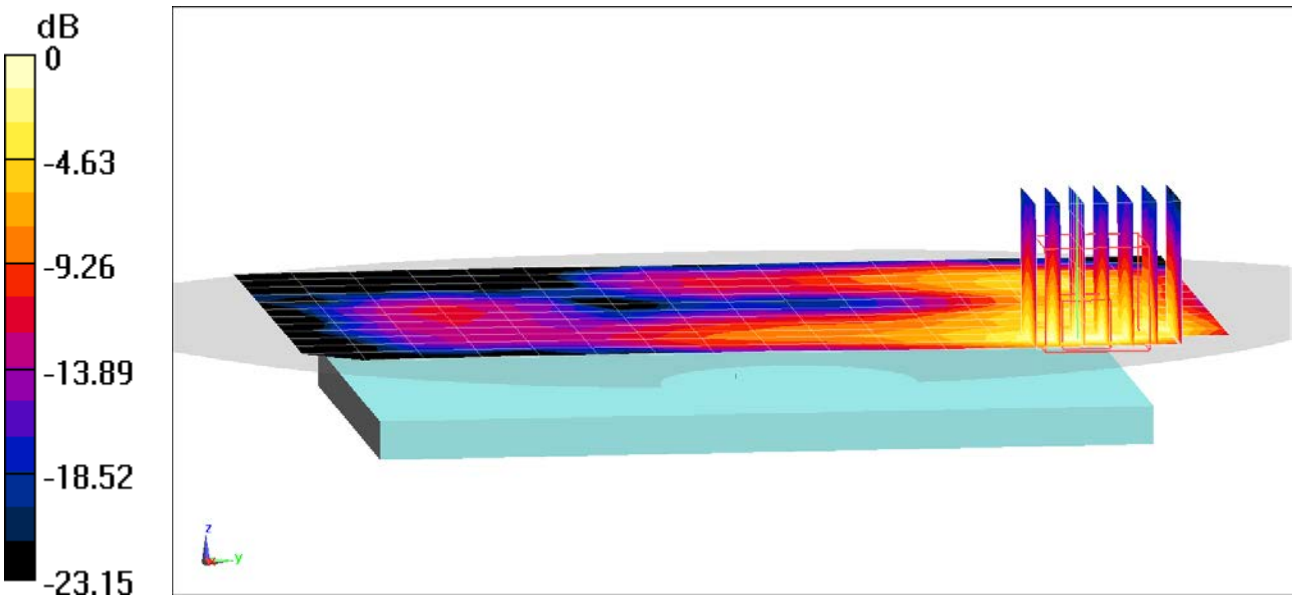
Communication System: UID 0, Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body Medium parameters used (interpolated):
$f = 2402$ MHz; $\sigma = 1.987$ S/m; $\varepsilon_r = 51.7$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-08-2019; Ambient Temp: 23.7°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2402 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: Right Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1797
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Bluetooth, UMPC Body SAR, Ch 0, 1 Mbps, Front Side

Area Scan (13x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.104 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.195 W/kg
SAR(1 g) = 0.089 W/kg



0 dB = 0.153 W/kg = -8.15 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1954M

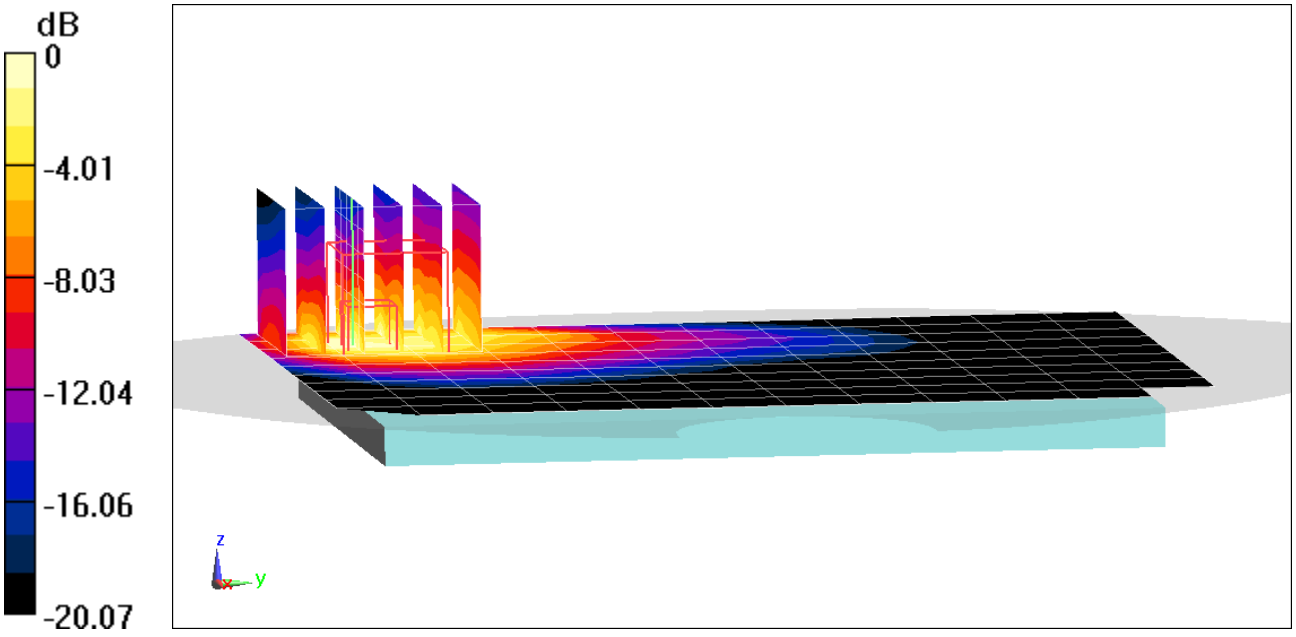
Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 836.6 MHz; Duty Cycle: 1:2.76
Medium: 835 Body Medium parameters used (interpolated):
$f = 836.6$ MHz; $\sigma = 0.984$ S/m; $\varepsilon_r = 54.282$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 5-8-2019; Ambient Temp: 21.9°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 836.6 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 850, UMPC Extremity SAR, Back side, Mid.ch, 3 Tx Slots

Area Scan (11x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 43.28 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 5.61 W/kg
SAR(10 g) = 1.21 W/kg



0 dB = 4.20 W/kg = 6.23 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1908M

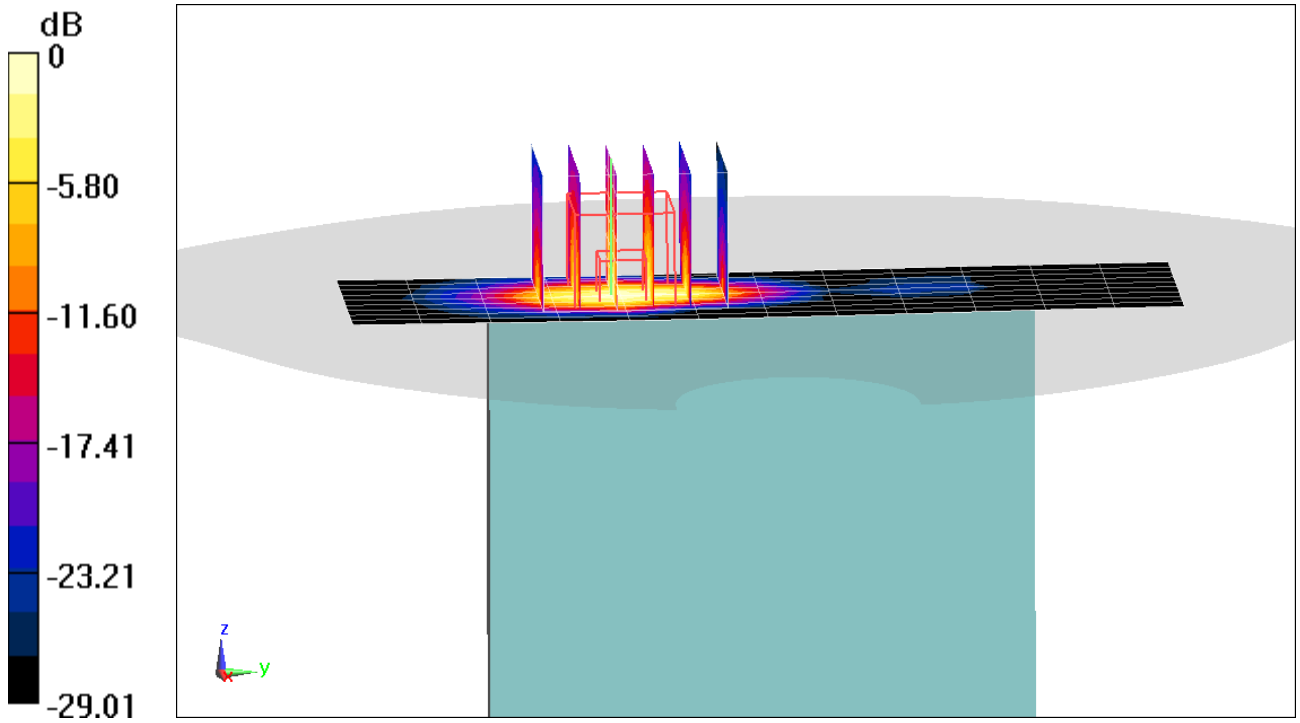
Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 1850.2 MHz; Duty Cycle: 1:2.76
Medium: 1900 Body Medium parameters used (interpolated):
f = 1850.2 MHz; σ = 1.485 S/m; ε_r = 52.046; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-08-2019; Ambient Temp: 23.5°C; Tissue Temp: 21.6°C

Probe: EX3DV4 - SN7357; ConvF(7.93, 7.93, 7.93) @ 1850.2 MHz; Calibrated: 4/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/18/2019
Phantom: Twin-SAM V4.0 Front Right; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 1900, UMPC Extremity SAR, Bottom Edge, Low.ch, 3 Tx Slots

Area Scan (10x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 69.34 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 15.8 W/kg
SAR(10 g) = 2.6 W/kg



0 dB = 12.7 W/kg = 11.04 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1940M

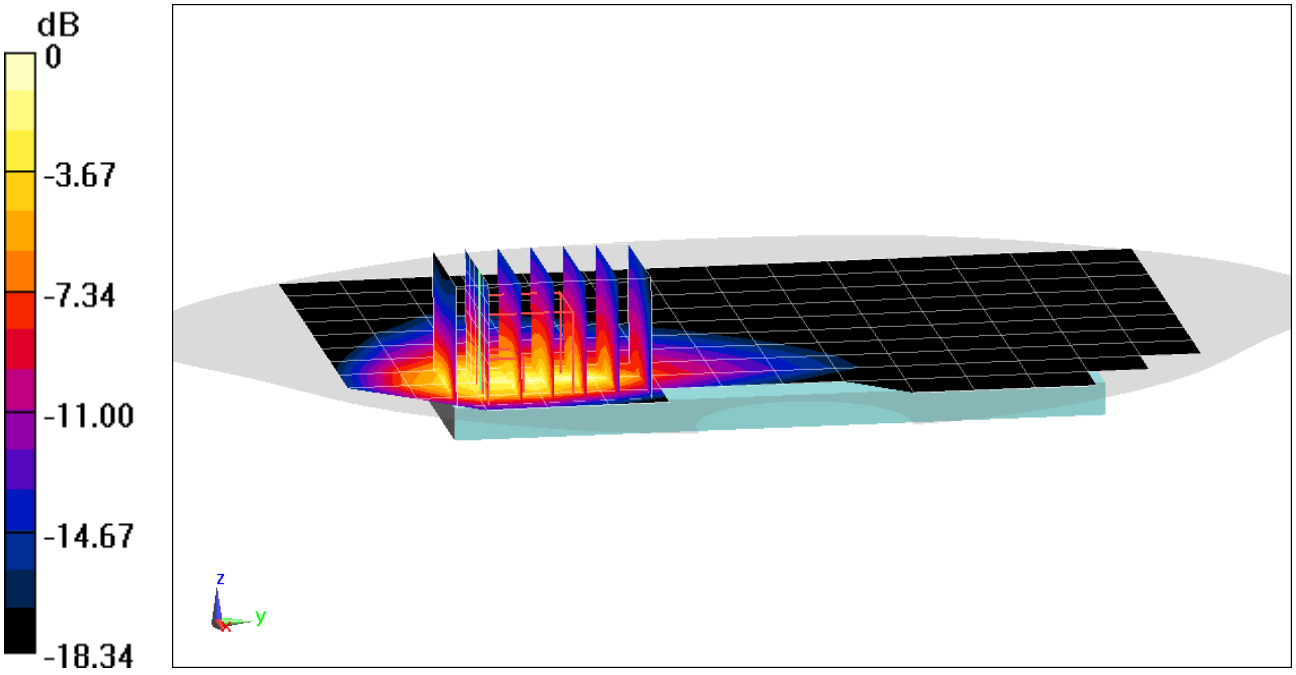
Communication System: UID 0, _UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.984 S/m; ε_r = 54.069; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-10-2019; Ambient Temp: 20.5°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 836.6 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 850, UMPC Extremity SAR, Front side, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 55.45 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 9.86 W/kg
SAR(10 g) = 1.77 W/kg



0 dB = 3.91 W/kg = 5.92 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1875M

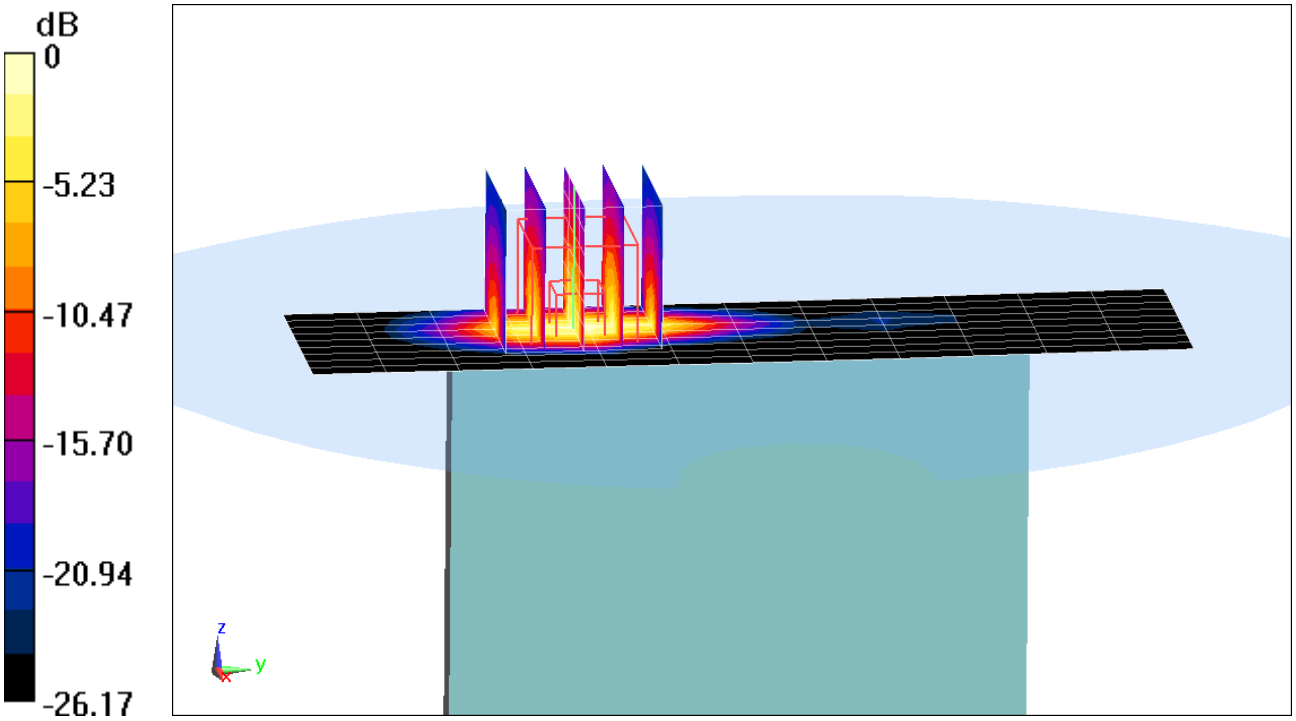
Communication System: UID 0, UMTS; Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1752.6 MHz; σ = 1.498 S/m; ε_r = 52.186; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-06-2019; Ambient Temp: 22.2°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN3914; ConvF(7.89, 7.89, 7.89) @ 1752.6 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1750, UMPC Extremity SAR, Bottom Edge, High.ch

Area Scan (10x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 67.71 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 14.0 W/kg
SAR(10 g) = 2.41 W/kg



0 dB = 11.4 W/kg = 10.57 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1897M

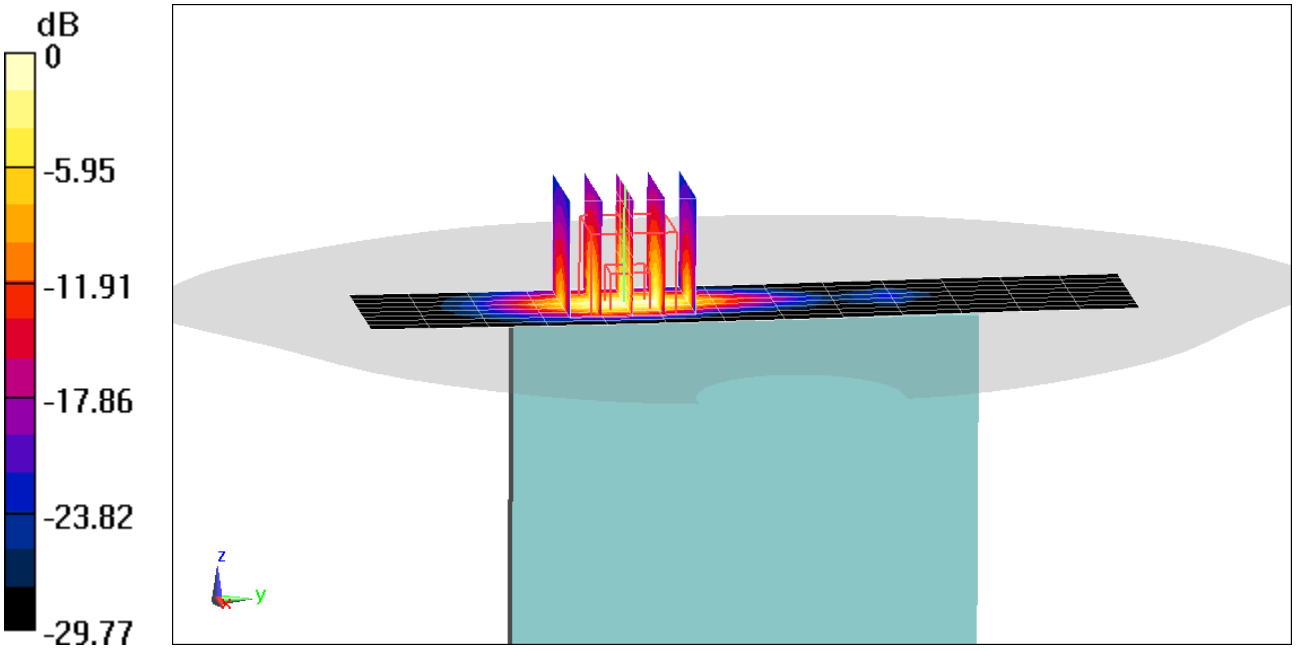
Communication System: UID 0, UMTS; Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1907.6 MHz; σ = 1.529 S/m; ε_r = 52.158; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-06-2019; Ambient Temp: 22.0°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(7.93, 7.93, 7.93) @ 1907.6 MHz; Calibrated: 4/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/18/2019
Phantom: Twin-SAM V4.0 Front Right; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1900, UMPC Extremity SAR, Bottom Edge, High.ch

Area Scan (9x14x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 72.37 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 16.1 W/kg
SAR(10 g) = 2.56 W/kg



0 dB = 13.2 W/kg = 11.21 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1954M

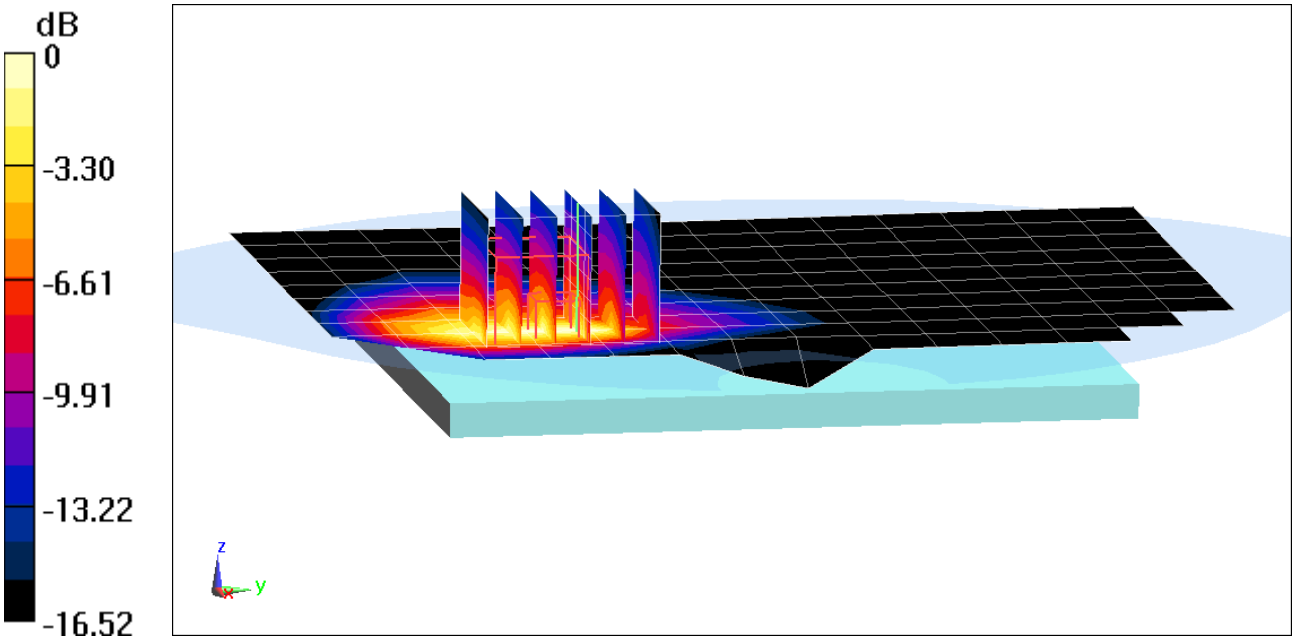
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.933 S/m; ε_r = 54.27; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-14-2019; Ambient Temp: 23.5°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7410; ConvF(9.87, 9.87, 9.87) @ 707.5 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 12, UMPC Extremity SAR, Front side, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 25 RB Offset

Area Scan (11x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 45.37 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 4.76 W/kg
SAR(10 g) = 0.980 W/kg



0 dB = 3.42 W/kg = 5.34 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1954M

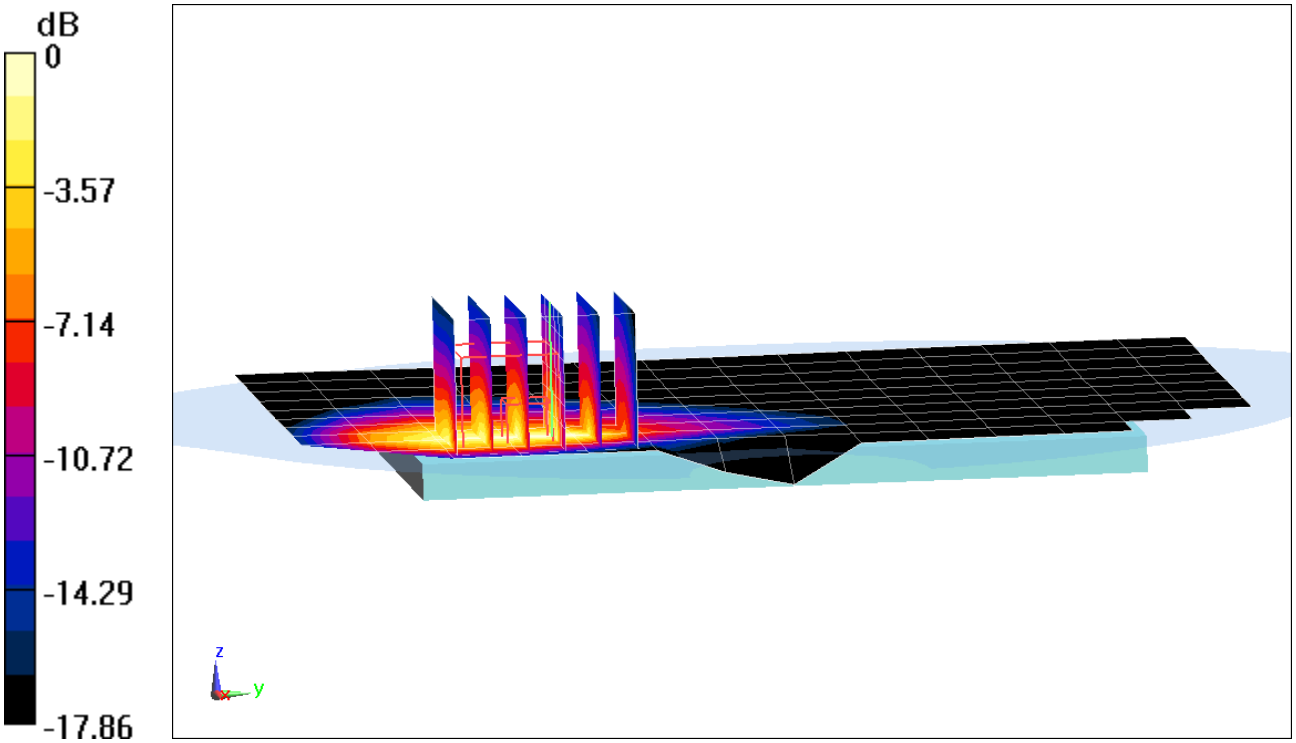
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 782 MHz; σ = 0.999 S/m; ε_r = 53.585; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-14-2019; Ambient Temp: 23.5°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7410; ConvF(9.87, 9.87, 9.87) @ 782 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 13, UMPC Extremity SAR, Front side, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 50.14 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 5.81 W/kg
SAR(10 g) = 1.27 W/kg



0 dB = 4.26 W/kg = 6.29 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1940M

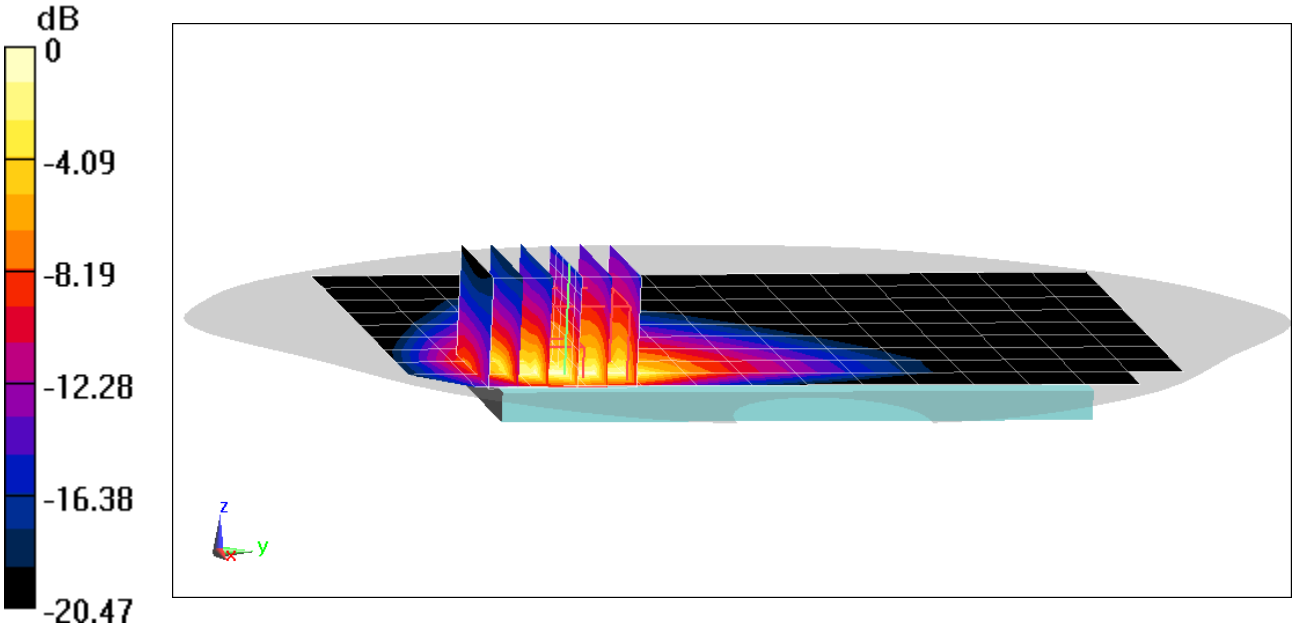
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 831.5 MHz; σ = 1.002 S/m; ε_r = 53.019; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date:06-05-2019; Ambient Temp: 22.7°C; Tissue Temp: 20.2°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 831.5 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 26 (Cell.), UMPC Extremity SAR, Front side, Mid.ch, 15 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (10x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 46.68 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 9.06 W/kg
SAR(10 g) = 1.69 W/kg



0 dB = 3.17 W/kg = 5.01 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1875M

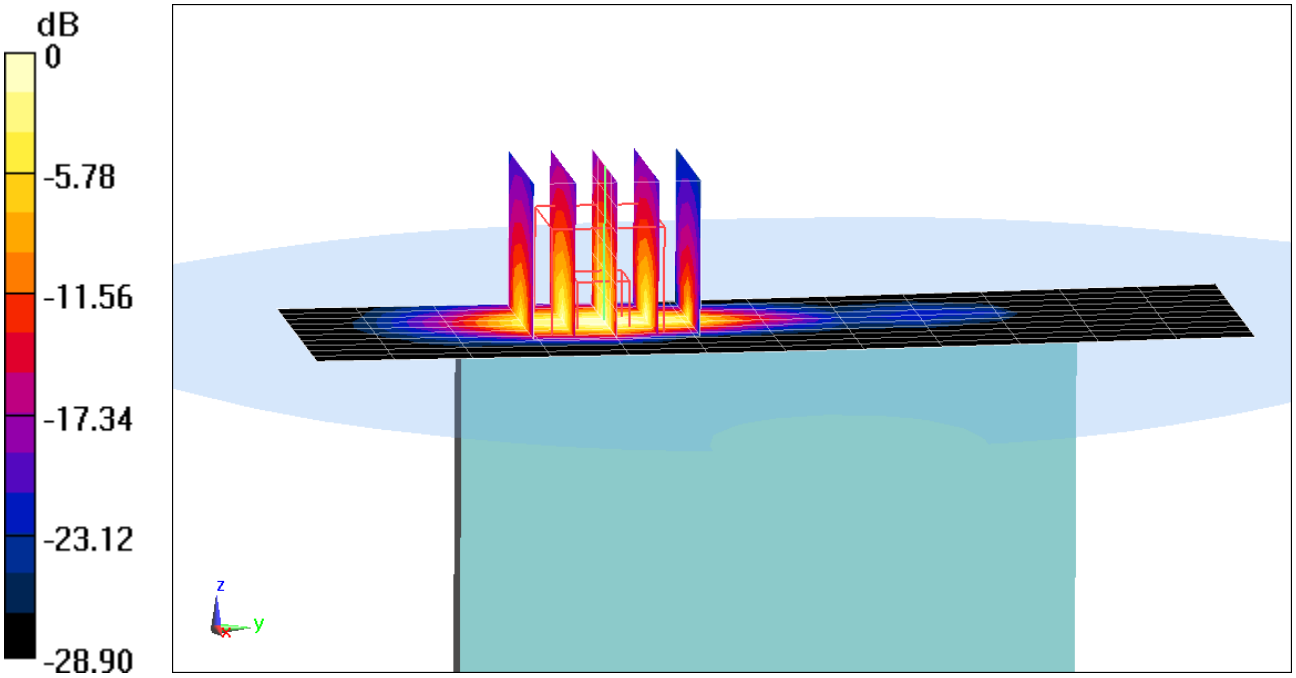
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
$f = 1770$ MHz; $\sigma = 1.517$ S/m; $\varepsilon_r = 52.111$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-06-2019; Ambient Temp: 22.2°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN3914; ConvF(7.89, 7.89, 7.89) @ 1770 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS), UMPC Extremity SAR, Bottom Edge, High.ch, 20 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset

Area Scan (11x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 75.32 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 17.5 W/kg
SAR(10 g) = 2.87 W/kg



0 dB = 14.2 W/kg = 11.52 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1940M

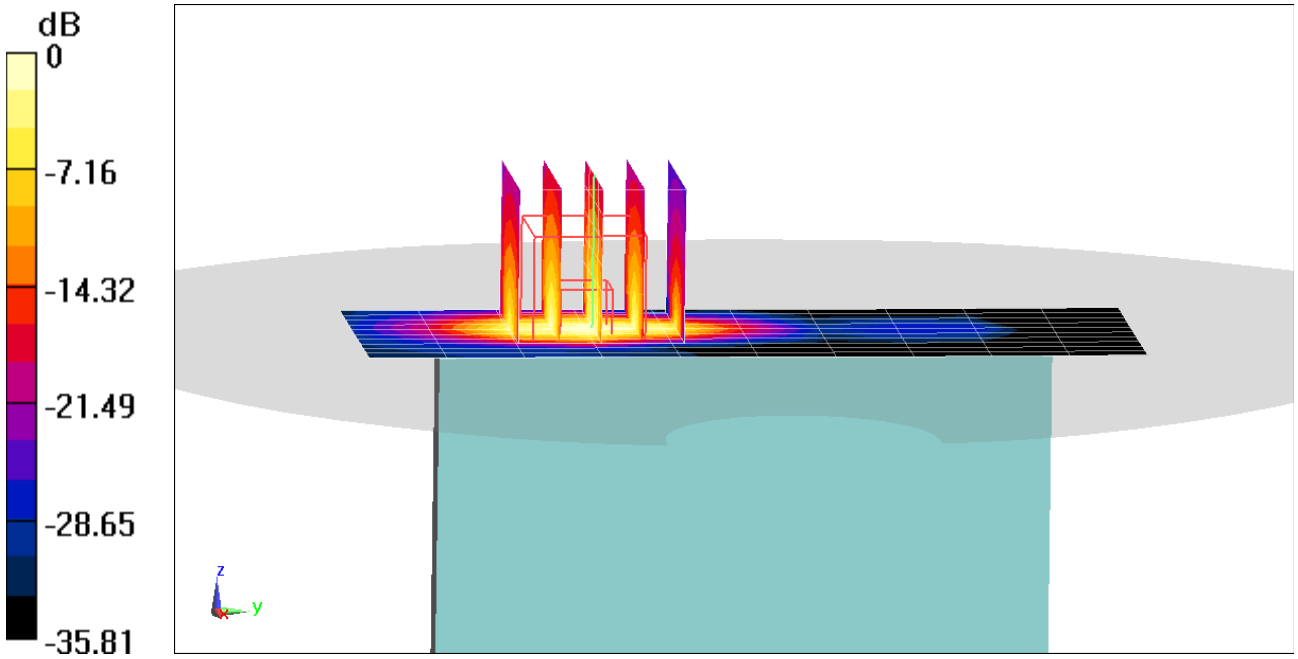
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1882.5 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1882.5 MHz; σ = 1.55 S/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 5-27-2019; Ambient Temp: 21.3°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1882.5 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 25 (PCS), UMPC Extremity SAR, Bottom Edge, Mid.ch, 20 MHz Bandwidth, QPSK, 50 RB, 50 RB Offset

Area Scan (9x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 75.96 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 17.7 W/kg
SAR(10 g) = 2.86 W/kg



0 dB = 14.2 W/kg = 11.52 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1940M

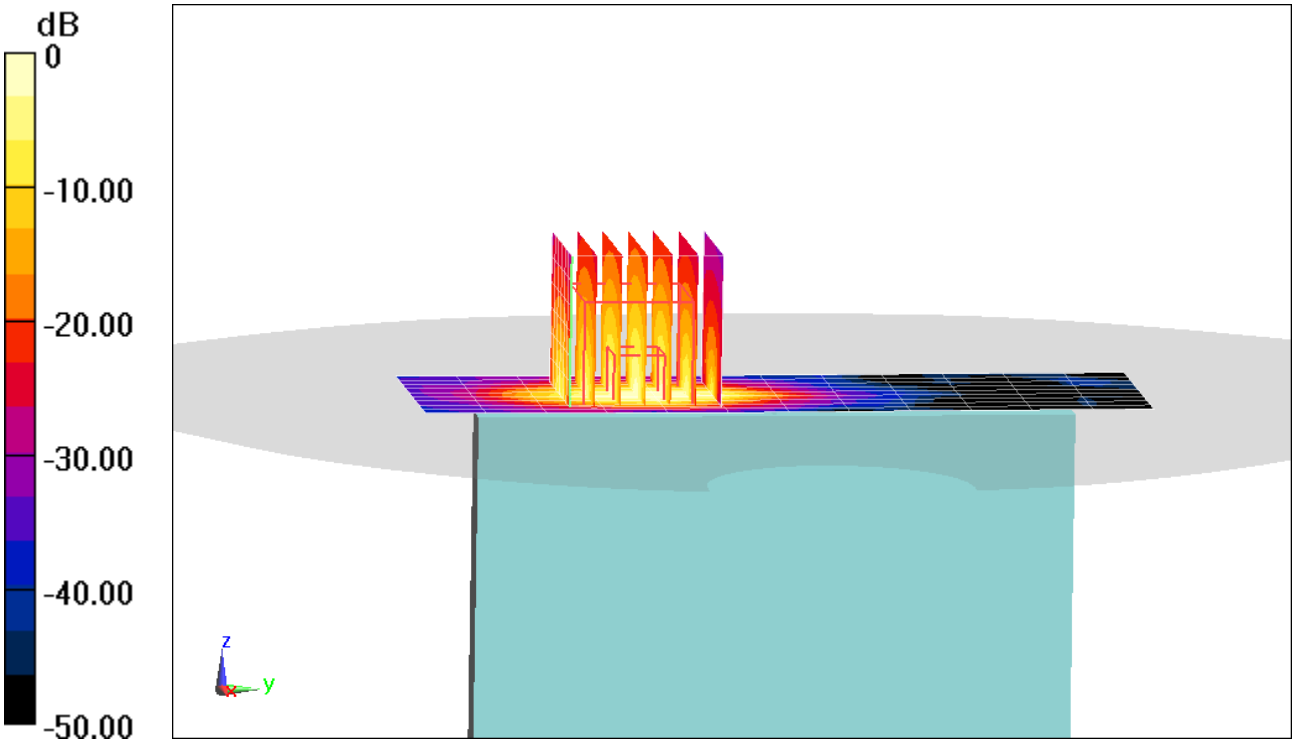
Communication System: UID 0, LTE Band 41; Frequency: 2680 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body Medium parameters used (interpolated):
f = 2680 MHz; σ = 2.32 S/m; ε_r = 50.793; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-26-2019; Ambient Temp: 22.8°C; Tissue Temp: 23.1°C

Probe: EX3DV4 - SN7417; ConvF(7.37, 7.37, 7.37) @ 2680 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 41, UMPC Extremity SAR, Bottom Edge, High.ch, 20 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset

Area Scan (12x14x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 64.12 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 24.1 W/kg
SAR(10 g) = 2.32 W/kg



0 dB = 15.8 W/kg = 11.99 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1921M

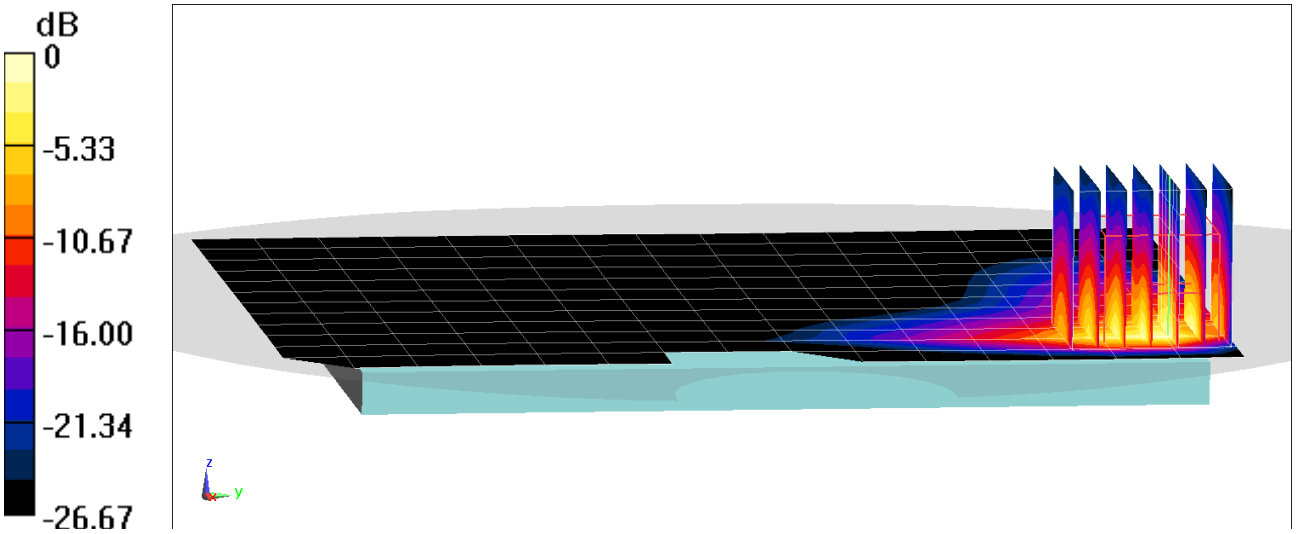
Communication System: UID 0, _IEEE 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2437 MHz; σ = 2.018 S/m; ε_r = 52.114; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-16-2019; Ambient Temp: 23.4°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2437 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: Right Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1797
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11b Antenna 1, 22 MHz Bandwidth,
UMPC Extremity SAR, Ch 6, 1 Mbps, Front Side

Area Scan (7x7x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.5090 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 19.4 W/kg
SAR(10 g) = 2.48 W/kg



0 dB = 14.1 W/kg = 11.49 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1968M

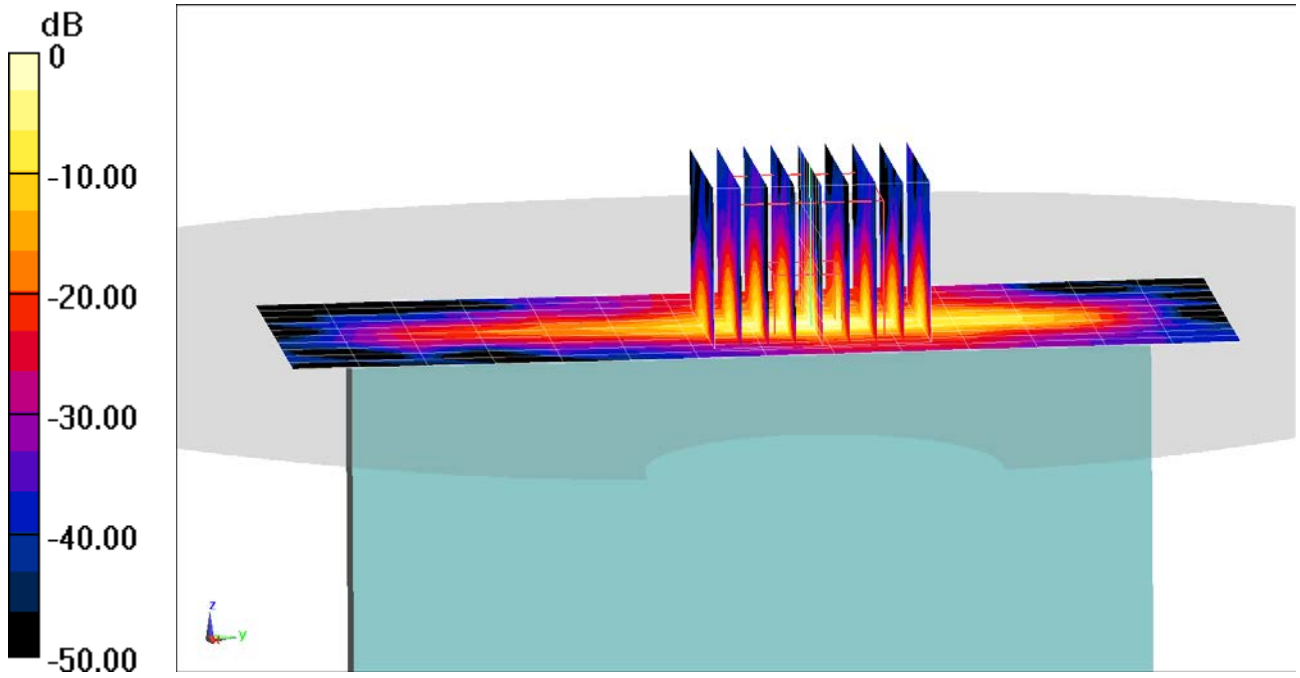
Communication System: UID 0, 802.11n 5.2-5.8 GHz Band; Frequency: 5825 MHz; Duty Cycle: 1:1
Medium: 5 GHz Body Medium parameters used:
f = 5825 MHz; σ = 6.22 S/m; ε_r = 48.29; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-28-2019; Ambient Temp: 20.9°C; Tissue Temp: 20.7°C

Probe: EX3DV4 - SN7308; ConvF(4.18, 4.18, 4.18) @ 5825 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11n MIMO, U-NII-3, 20 MHz Bandwidth,
Body SAR, Ch 165, 13 Mbps, Top Edge

Area Scan (9x17x1): Measurement grid: dx=5mm, dy=10mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 28.87 V/m; Power Drift = -0.20 dB
Peak SAR (extrapolated) = 67.2 W/kg
SAR(10 g) = 1.67 W/kg



0 dB = 27.2 W/kg = 14.35 dBW/kg

DUT: A3LSMF907B; Type: Portable Handset; Serial: 1921M

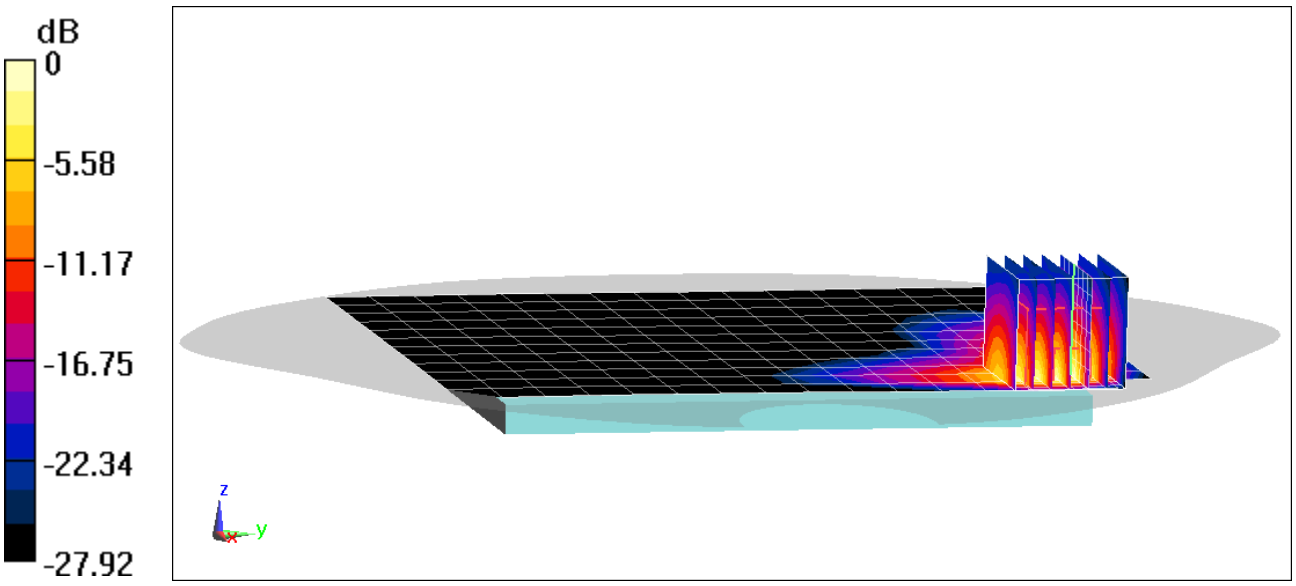
Communication System: UID 0, Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body Medium parameters used (interpolated):
f = 2402 MHz; σ = 1.987 S/m; ε_r = 51.7; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05-08-2019; Ambient Temp: 23.7°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2402 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: Right Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1797
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Bluetooth, UMPC Extremity SAR, Ch 0, 1 Mbps, Front Side

Area Scan (13x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.08 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 4.19 W/kg
SAR(10 g) = 0.535 W/kg



0 dB = 3.13 W/kg = 4.96 dBW/kg

APPENDIX B: SYSTEM VERIFICATION

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1161

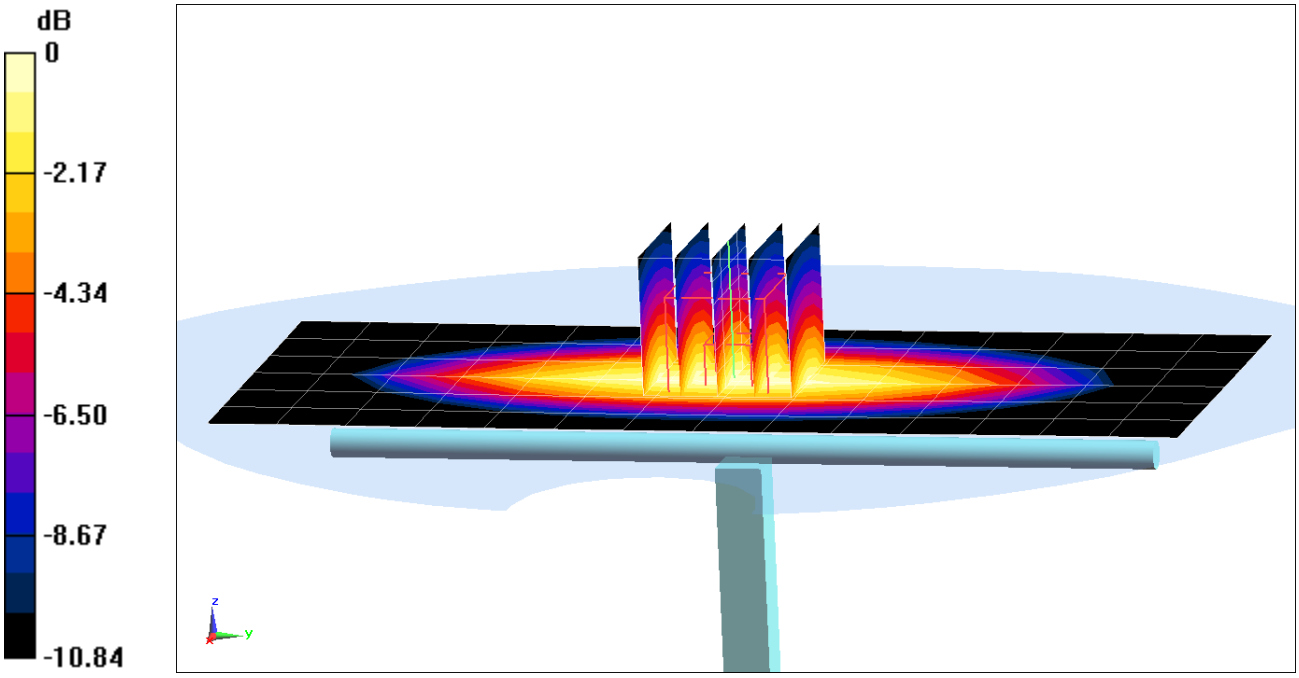
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 750 MHz; σ = 0.918 S/m; ε_r = 42.895; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05-09-2019; Ambient Temp: 23.1°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN3914; ConvF(10, 10, 10) @ 750 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: Left For Head SAM with CRP v5.0; Type: QD000P40CD; Serial: TP:1687
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.77 W/kg
SAR(1 g) = 1.73 W/kg
Deviation(1 g) = 7.72%



0 dB = 2.38 W/kg = 3.77 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

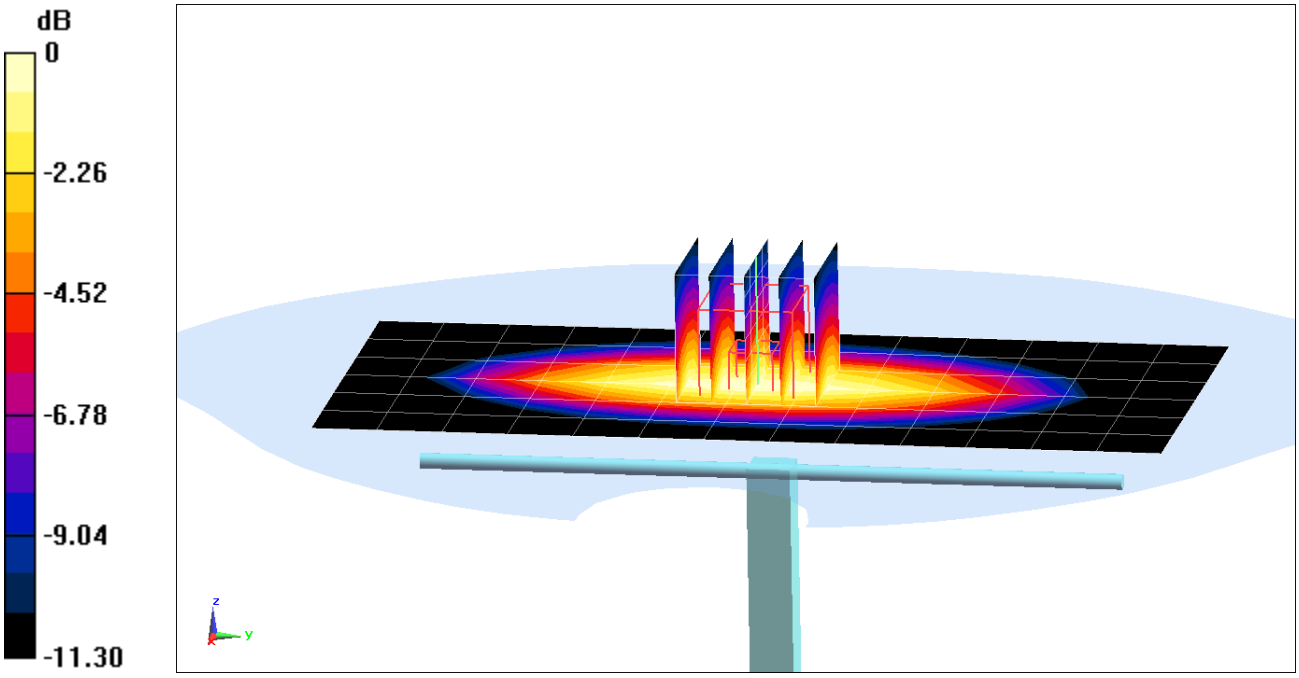
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used:
f = 835 MHz; σ = 0.936 S/m; ε_r = 39.66; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05-08-2019; Ambient Temp: 24.4°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN3914; ConvF(9.5, 9.5, 9.5) @ 835 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: Left For Head SAM with CRP v5.0; Type: QD000P40CD; Serial: TP:1687
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 3.19 W/kg
SAR(1 g) = 2.07 W/kg
Deviation(1 g) = 7.92%



0 dB = 2.81 W/kg = 4.49 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

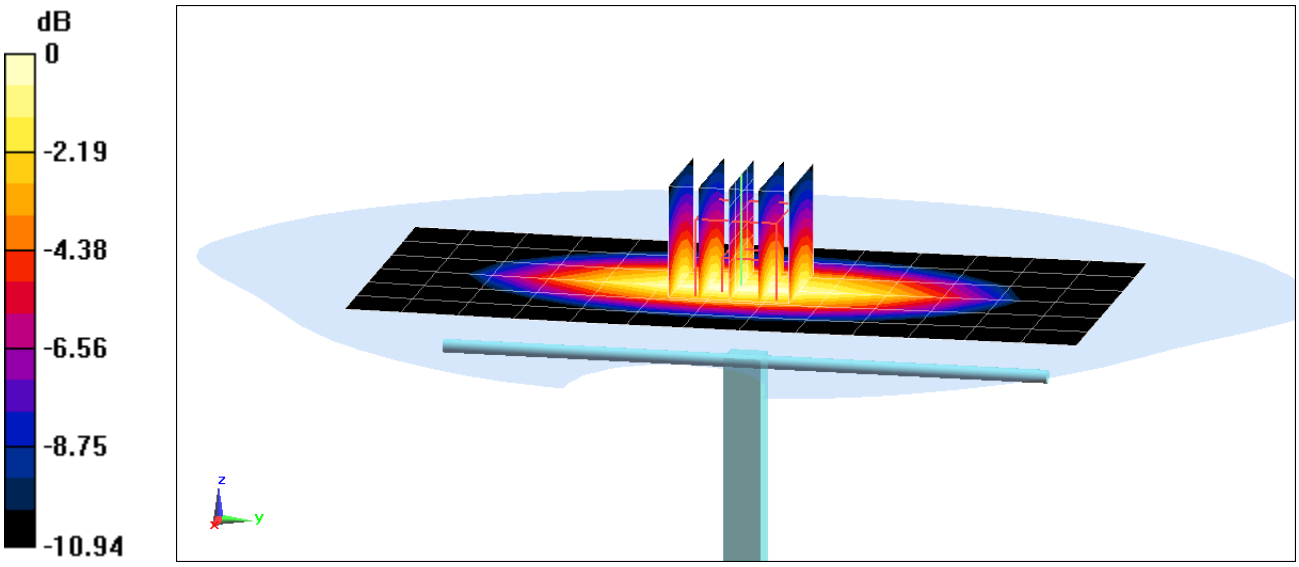
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used:
f = 835 MHz; σ = 0.934 S/m; ε_r = 43.147; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-06-2019; Ambient Temp: 21.1°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7406; ConvF(9.78, 9.78, 9.78) @ 835 MHz; Calibrated: 5/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn859; Calibrated: 5/8/2019
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 3.17 W/kg
SAR(1 g) = 2.04 W/kg
Deviation(1 g) = 6.36%



0 dB = 2.78 W/kg = 4.44 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

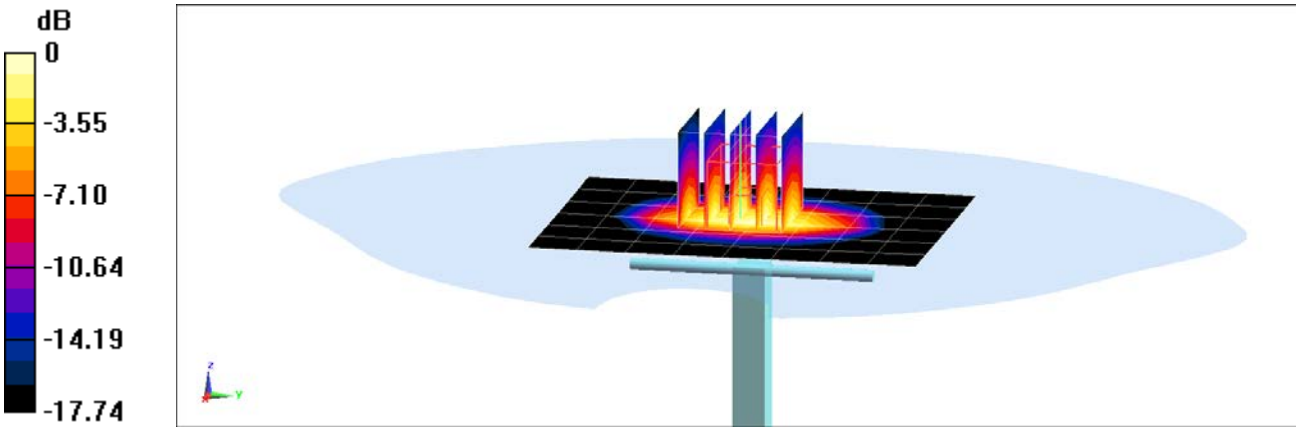
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Head; Medium parameters used:
f = 1750 MHz; σ = 1.392 S/m; ε_r = 41.682; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-06-2019; Ambient Temp: 21.9°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7409; ConvF(8.43, 8.43, 8.43) @ 1750 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 6.73 W/kg
SAR(1 g) = 3.64 W/kg
Deviation(1 g) = 0.55%



0 dB = 5.60 W/kg = 7.48 dBW/kg

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

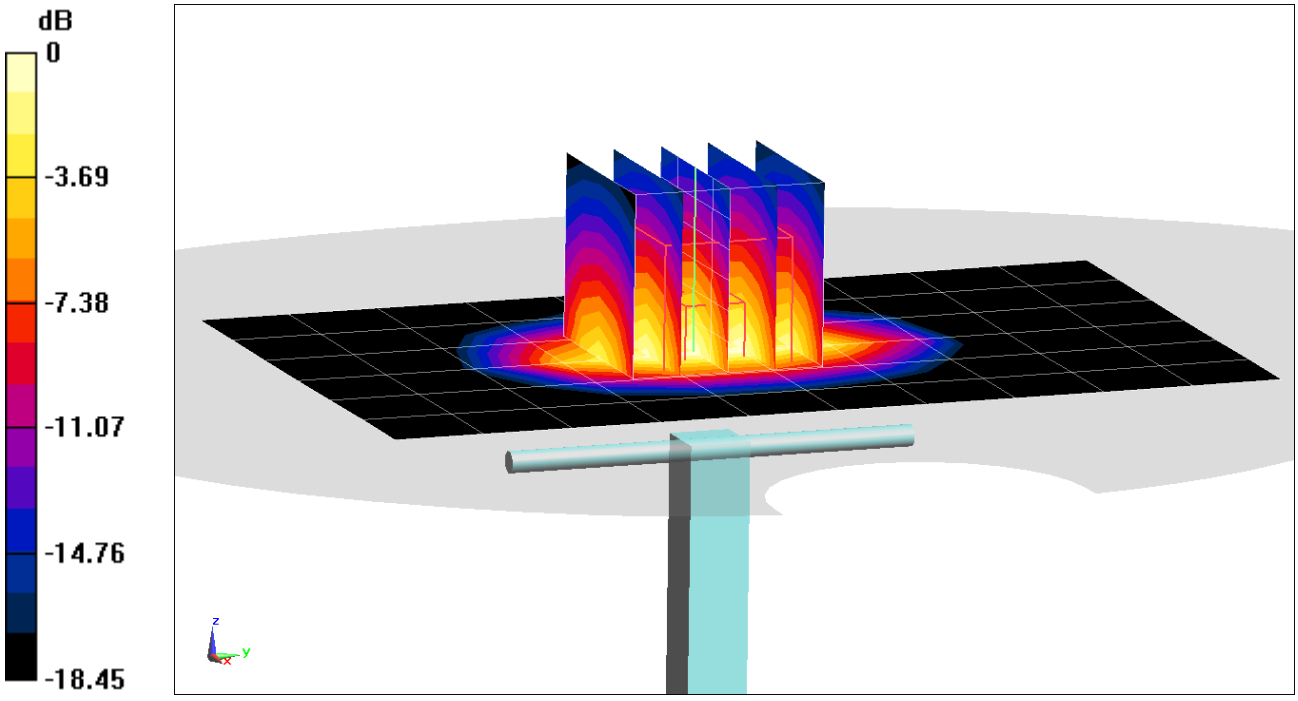
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.432 S/m; ε_r = 39.345; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-08-2019; Ambient Temp: 23.8°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7410; ConvF(8.16, 8.16, 8.16) @ 1900 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.34 W/kg
SAR(1 g) = 4.06 W/kg
Deviation(1 g) = 3.31%



0 dB = 6.26 W/kg = 7.97 dBW/kg

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

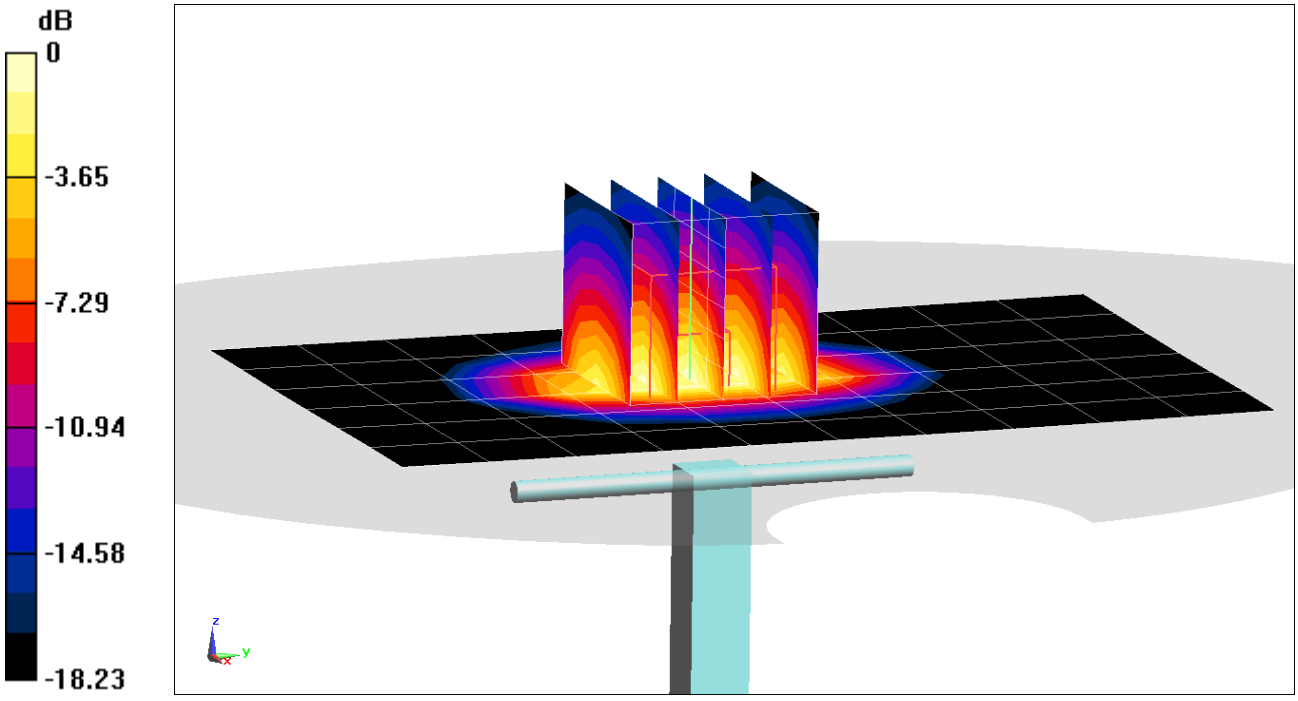
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.458 S/m; ε_r = 38.566; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-12-2019; Ambient Temp: 21.3°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7410; ConvF(8.16, 8.16, 8.16) @ 1900 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.68 W/kg
SAR(1 g) = 4.24 W/kg
Deviation(1 g) = 7.89%



0 dB = 6.59 W/kg = 8.19 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 981

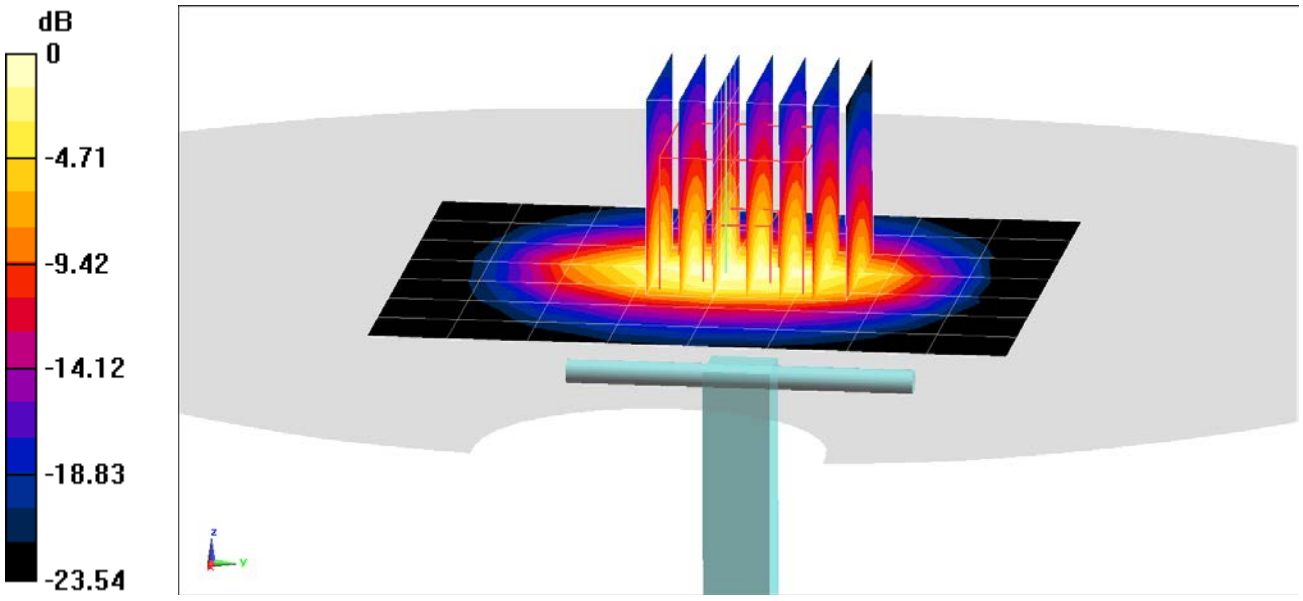
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2450 MHz; σ = 1.797 S/m; ε_r = 37.892; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-08-2019; Ambient Temp: 23.3°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN3589; ConvF(6.46, 6.46, 6.46) @ 2450 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.2 W/kg
SAR(1 g) = 5.12 W/kg
Deviation(1 g) = -2.10%



0 dB = 8.71 W/kg = 9.40 dBW/kg

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1064

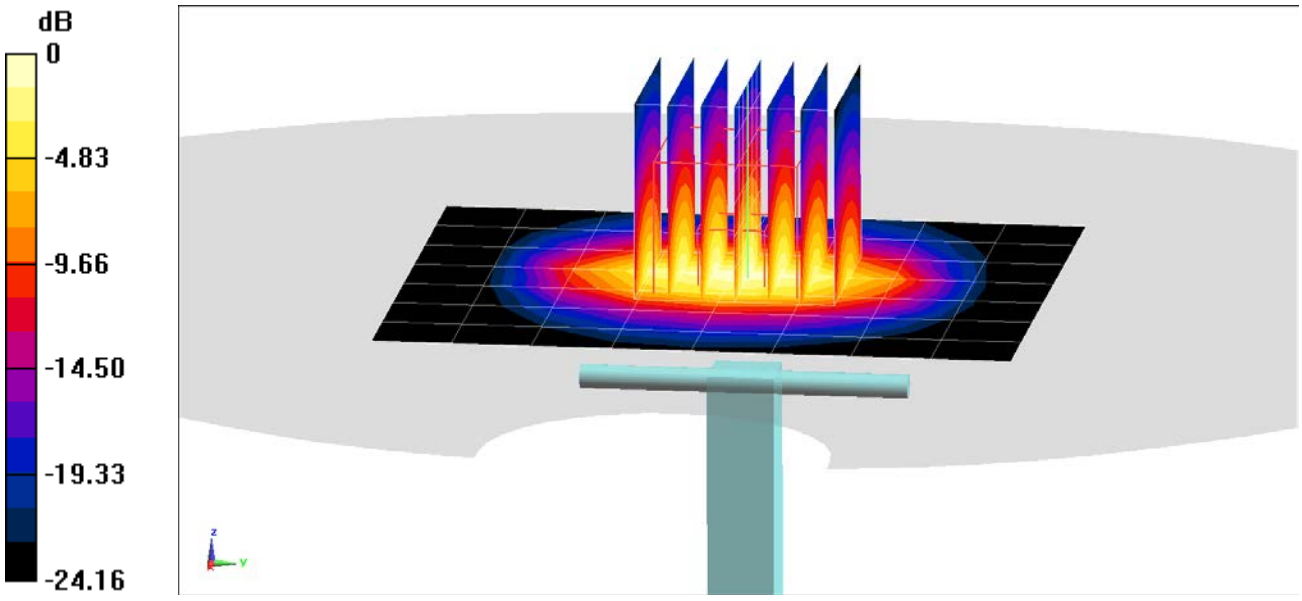
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2600 MHz; σ = 1.912 S/m; ε_r = 37.696; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-08-2019; Ambient Temp: 23.3°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN3589; ConvF(6.25, 6.25, 6.25) @ 2600 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 13.4 W/kg
SAR(1 g) = 6.1 W/kg
Deviation(1 g) = 7.02%



0 dB = 10.5 W/kg = 10.21 dBW/kg

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1191

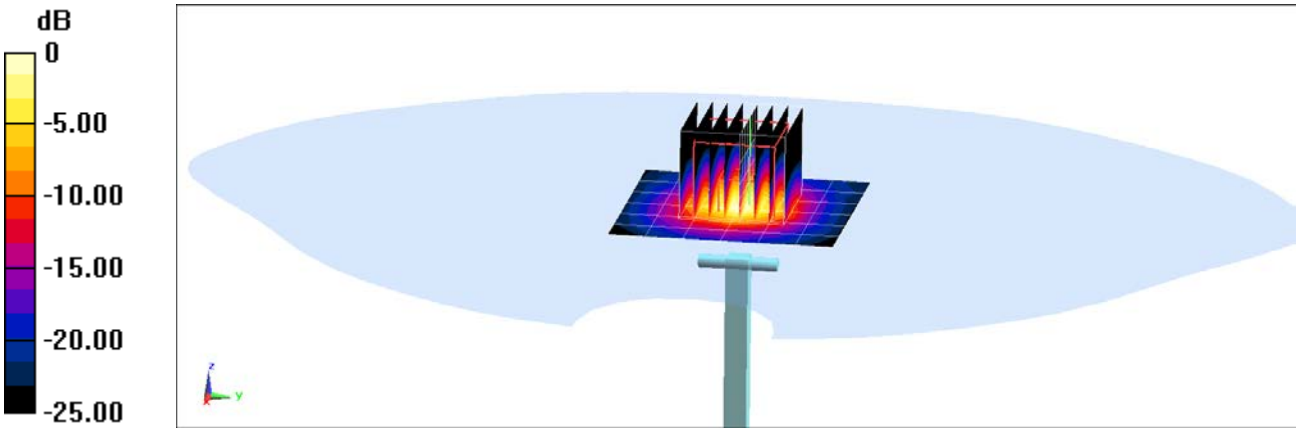
Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1
Medium: 5GHz Head; Medium parameters used (interpolated):
$f = 5250$ MHz; $\sigma = 4.772$ S/m; $\varepsilon_r = 36.501$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-13-2019; Ambient Temp: 20.3°C; Tissue Temp: 20.9°C

Probe: EX3DV4 - SN7409; ConvF(5.2, 5.2, 5.2) @ 5250 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM with CRP v5.0 (Right); Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

5250 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 16.3 W/kg
SAR(1 g) = 3.9 W/kg
Deviation(1 g) = -1.14%



0 dB = 9.13 W/kg = 9.60 dBW/kg

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1191

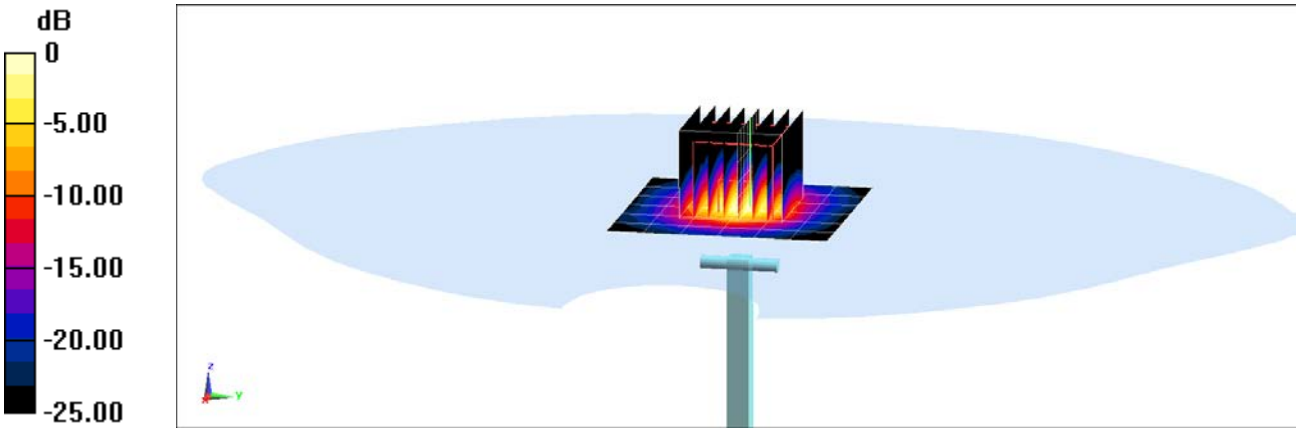
Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1
Medium: 5GHz Head; Medium parameters used:
f = 5600 MHz; σ = 5.186 S/m; ε_r = 35.834; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-13-2019; Ambient Temp: 20.3°C; Tissue Temp: 20.9°C

Probe: EX3DV4 - SN7409; ConvF(4.77, 4.77, 4.77) @ 5600 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM with CRP v5.0 (Right); Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

5600 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.4 W/kg
SAR(1 g) = 4.01 W/kg
Deviation(1 g) = -4.07%



0 dB = 9.73 W/kg = 9.88 dBW/kg

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1191

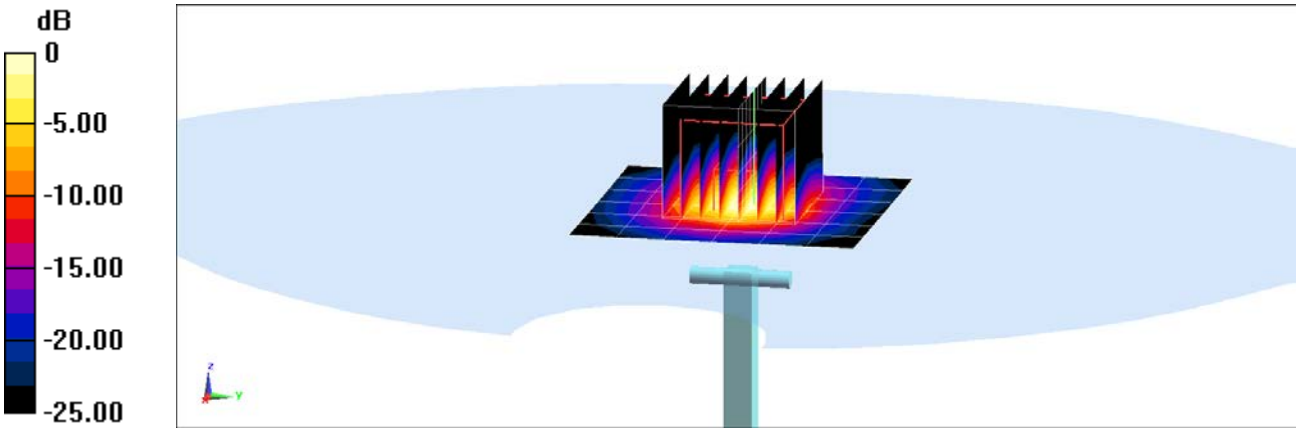
Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1
Medium: 5GHz Head; Medium parameters used (interpolated):
f = 5750 MHz; σ = 5.377 S/m; ε_r = 35.54; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-13-2019; Ambient Temp: 20.3°C; Tissue Temp: 20.9°C

Probe: EX3DV4 - SN7409; ConvF(4.82, 4.82, 4.82) @ 5750 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM with CRP v5.0 (Right); Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

5750 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.2 W/kg
SAR(1 g) = 3.85 W/kg
Deviation(1 g) = -2.65%



0 dB = 9.34 W/kg = 9.70 dBW/kg

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1161

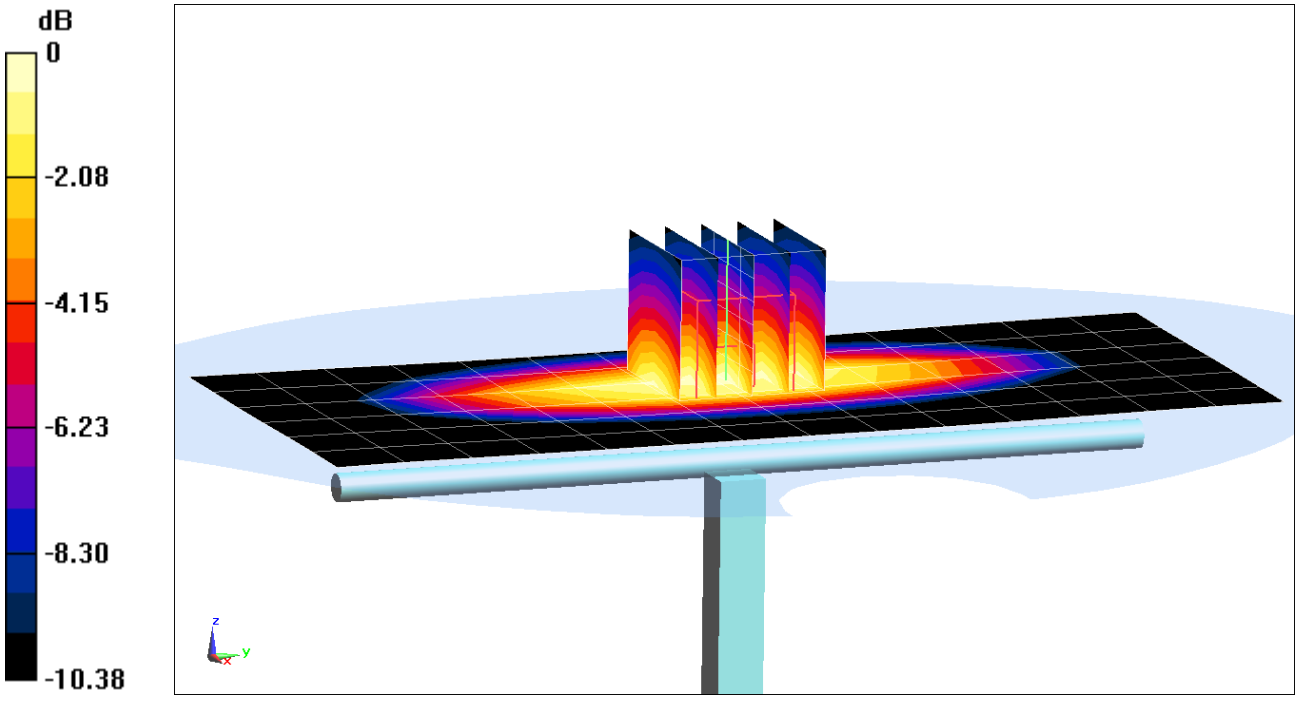
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 750 MHz; σ = 0.971 S/m; ε_r = 53.886; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05-14-2019; Ambient Temp: 23.5°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7410; ConvF(9.87, 9.87, 9.87) @ 750 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.67 W/kg
SAR(1 g) = 1.77 W/kg; SAR(10 g) = 1.17 W/kg
Deviation(1 g) = 4.98%; Deviation(10 g) = 5.41%



0 dB = 2.36 W/kg = 3.73 dBW/kg

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

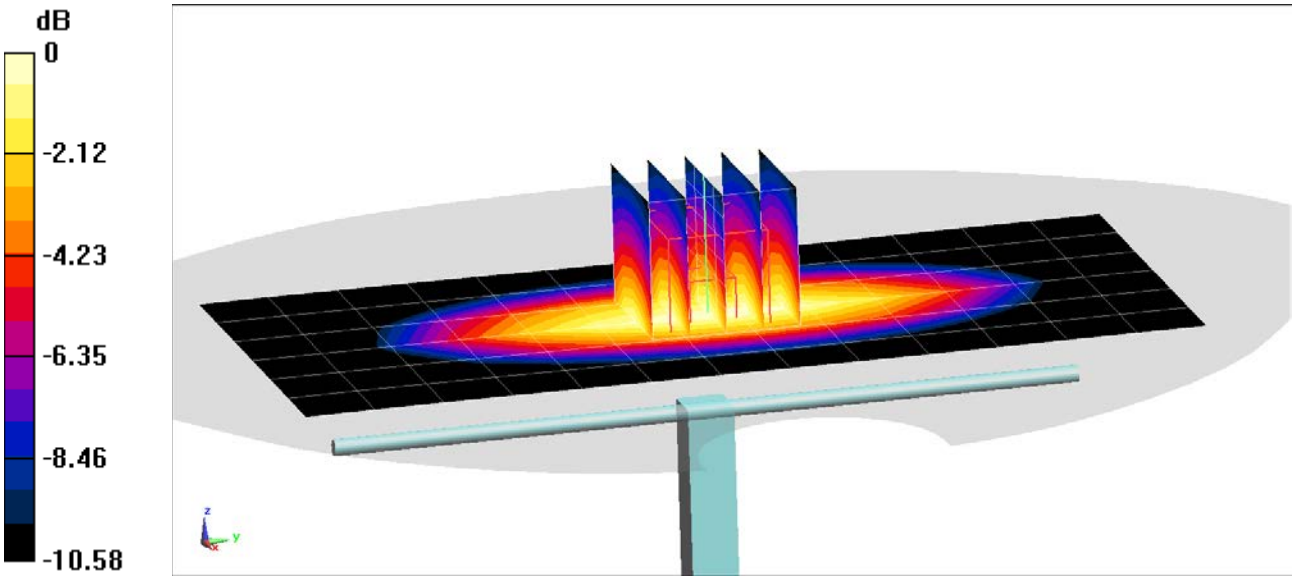
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used:
f = 835 MHz; σ = 0.983 S/m; ε_r = 54.284; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 5-8-2019; Ambient Temp: 21.9°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 835 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 3.01 W/kg
SAR(1 g) = 1.95 W/kg; SAR(10 g) = 1.28 W/kg
Deviation(1 g) = 0.83%; Deviation(10 g) = 0.79%



0 dB = 2.64 W/kg = 4.22 dBW/kg

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

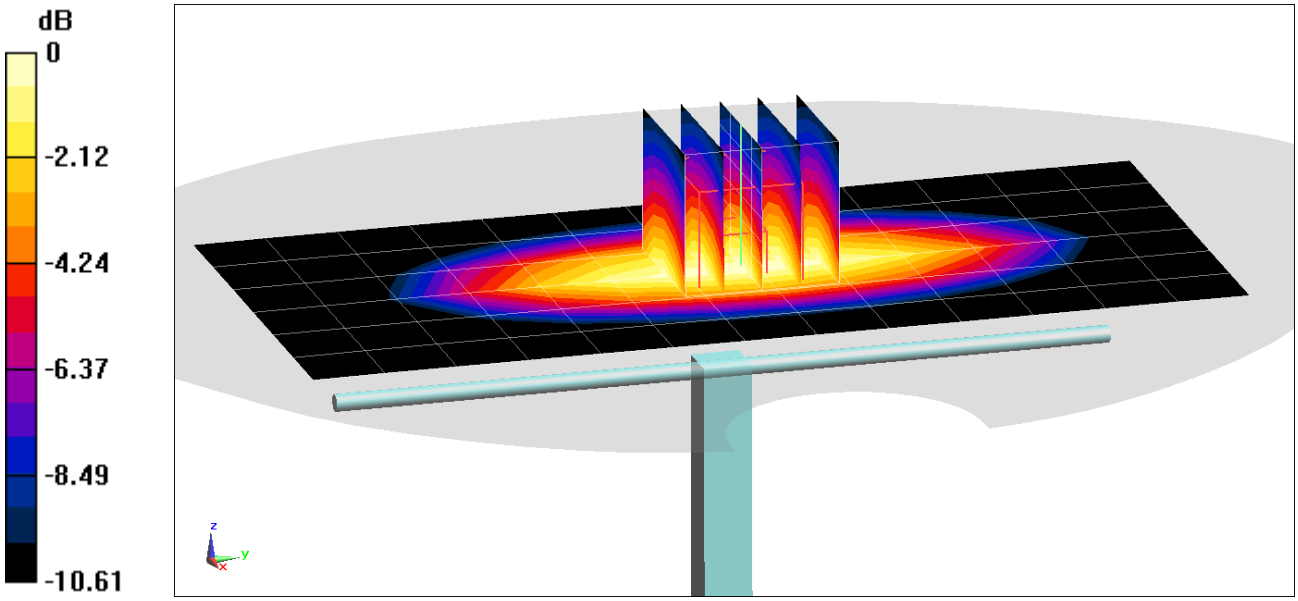
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used:
f = 835 MHz; σ = 0.987 S/m; ε_r = 52.997; ρ = 1000 kg/m^3
Phantom section: Flat Section Space: 1.5 cm

Test Date: 06-03-2019 Ambient Temp: 18.7°C; Tissue Temp: 19.8 °C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 835 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.97 W/kg
SAR(1 g) = 1.93 W/kg
Deviation(1 g) = -0.21%



0 dB = 2.61 W/kg = 4.17 dBW/kg

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

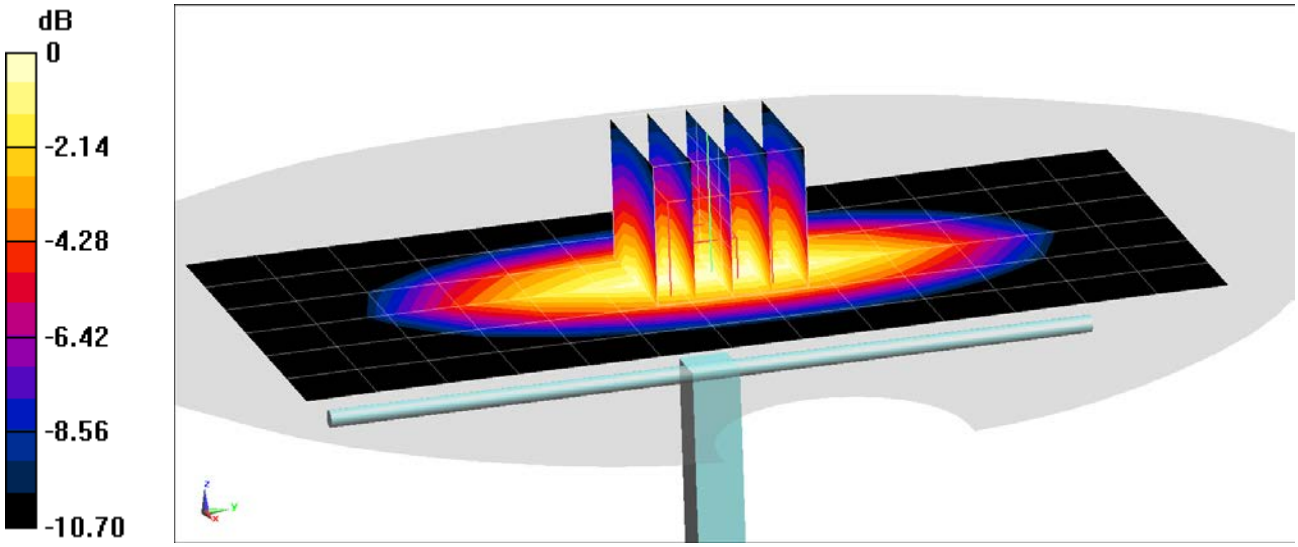
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used:
f = 835 MHz; σ = 1.004 S/m; ε_r = 53.015; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-05-2019; Ambient Temp: 22.7°C; Tissue Temp: 20.2°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 835 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 3.06 W/kg
SAR(1 g) = 2 W/kg; SAR(10 g) = 1.31 W/kg
Deviation(1 g) = 3.41%; Deviation(10 g) = 3.15%



0 dB = 2.68 W/kg = 4.28 dBW/kg

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DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

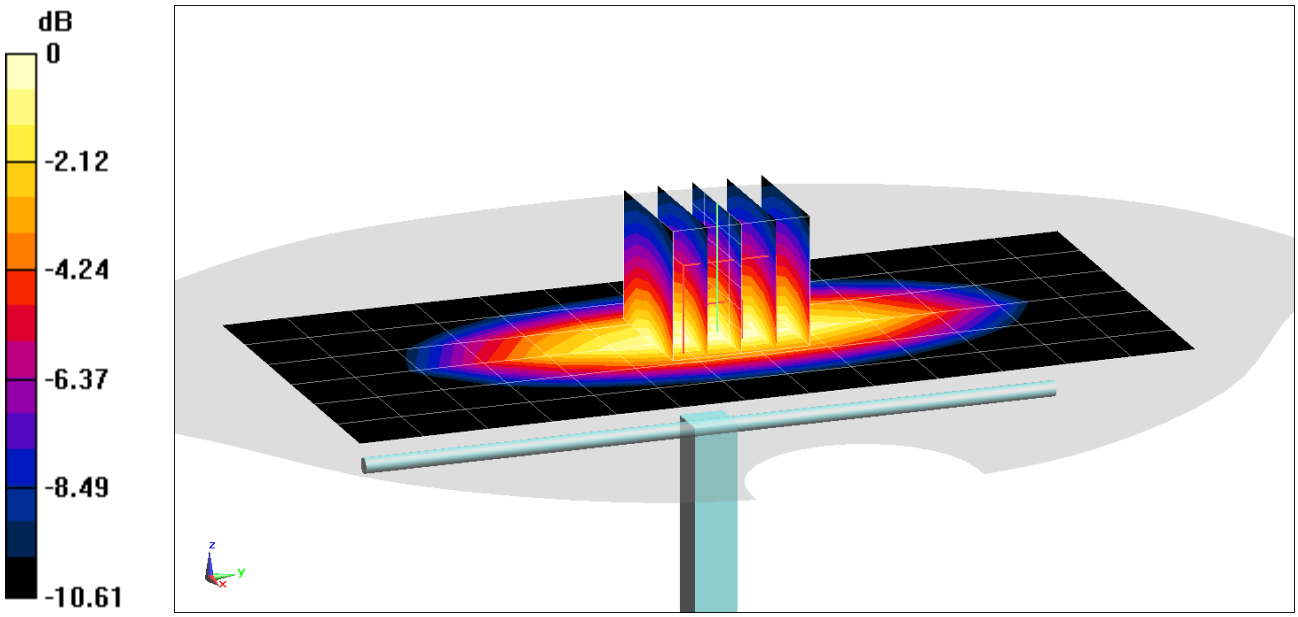
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used:
f = 835 MHz; σ = 0.983 S/m; ε_r = 54.072; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-10-2019; Ambient Temp: 20.5°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 835 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.99 W/kg
SAR(1 g) = 1.9 W/kg; SAR(10 g) = 1.25 W/kg
Deviation(1 g) = -1.76%; Deviation(10 g) = -1.57%



0 dB = 2.59 W/kg = 4.13 dBW/kg

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1148

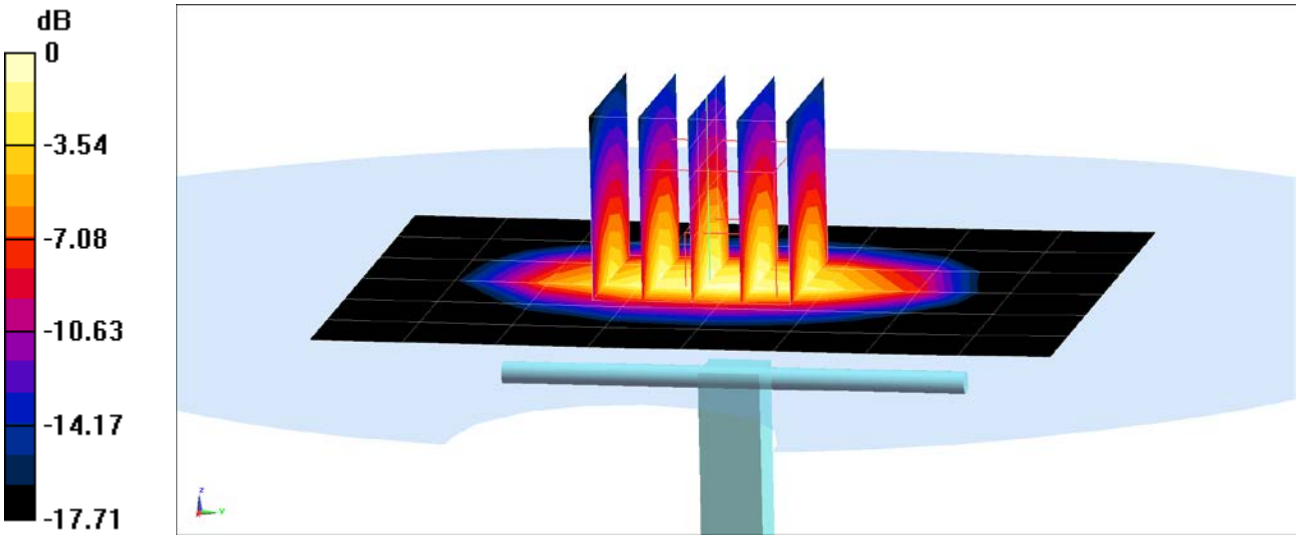
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.497 S/m; ε_r = 52.486; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05-01-2019; Ambient Temp: 22.3°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN3914; ConvF(7.89, 7.89, 7.89) @ 1750 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.07 W/kg
SAR(1 g) = 3.82 W/kg; SAR(10 g) = 2.01 W/kg
Deviation(1 g) = 3.24%; Deviation(10 g) = 1.52%



0 dB = 5.85 W/kg = 7.67 dBW/kg